



**2000 ARIZONA
BEHAVIORAL RISK FACTOR SURVEY
ANNUAL REPORT**



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ANNUAL REPORT**

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September 5, 2001

**Funded by the Centers for Disease Control and Prevention
Cooperative Agreement No. U58/CCU900587-17**

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BEHAVIORAL RISK FACTOR SURVEY (BRFS) 2000 ANNUAL REPORT

ARIZONA DEPARTMENT OF HEALTH SERVICES BUREAU OF PUBLIC HEALTH STATISTICS OFFICE OF EPIDEMIOLOGY AND STATISTICS

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ACKNOWLEDGMENTS

This report could not have been completed without the input and assistance from the following individuals.

Bureau of Public Health Statistics

Richard S. Porter, Bureau Chief

Office of Epidemiology & Statistics

Ross J. Brechner, M.D., M.S., M.P.H.

BRFS Contractor

Opinion Research Corporation, Macro International

Centers for Disease Control and Prevention Office of Surveillance and Analysis

Gloria Colclough

Bill Garvin

A **special thank you** to the Arizona residents for participating in the survey and cooperating with the interviewers.

TABLE OF CONTENTS

Author	i
Acknowledgments.....	ii
Executive Summary	1
Summary of Trends 1993-2000	2
2000 Behavioral Risk Factor Survey: Risk Factor/Chronic Disease Prevalence, Percentage within Demographic Groups	3
Risk Factors/Chronic Disease Definitions.....	5
Introduction.....	7
Methodology	8
A. Sampling Design.....	8
B. Questionnaire	8
C. CATI Implementation of BRFSS Protocol	8
D. Data Analysis	9
I. Annual Survey Results: Analysis of High Risk Groups.....	11
A. Health Care Coverage.....	12
B. Diabetes.....	15
C. Leisure-Time Activity.....	18
D. Cigarette Smoking	21
E. Fruit and Vegetable Consumption	24
F. Overweight (BMI)	27
G. Women's Health: Routine Mammography.....	30
H. Women's Health: Routine Pap Smear	33
II. Module Survey Results: Analysis of High Risk Groups.....	37
A. Oral Health.....	38
B. Arthritis and Quality of Life	41
C. Folic Acid Awareness.....	43
III. State Added Questions Survey Results: Analysis of High Risk Groups	46
A. Prostate Cancer Screening	47
B. Mental Health.....	49
C. Osteoporosis.....	52
Appendix I: Demographic Profile	
Appendix II: 2000 Arizona Behavioral Risk Factor Survey Core, Module, and State-Added Questions Listing	
Appendix III: 2000 Behavioral Risk Factor Survey Arizona Questionnaire	
Appendix IV: Behavioral Risk Factor Survey BRFSS Weighting Formula	

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EXECUTIVE SUMMARY

The Behavioral Risk Factor Survey (BRFS) is a random digit dial survey of adults (ages 18+) in Arizona. This survey asked about specific high-risk behaviors and chronic diseases during the year 2000. The Behavioral Risk Factor Survey program is a rich source of state-level public health data. These data have become integral to health promotion, disease prevention, and intervention planning throughout Arizona.

Highlights of the 2000 Behavioral Risk Factors Survey:

- 17.1% of all respondents reported that they did not have health coverage.
- More than 1/3 of adult Hispanic Arizonans reported that they did not have health coverage.
- 5.9% of respondents reported that a doctor told them that they had diabetes.
- 34.1% of women at least age 40 or older with a low household income had never had a routine mammogram.
- 9.9% of women ages 18-24 years, who were eligible for a pap smear, had never had one.
- 34.7% of respondents had a body mass index that classified them as overweight, and 18.1% were classified as obese.
- 18.5% of respondents were current smokers.
- More than half of the adult population in Arizona with a household income of less than \$15,000 reported having no dental visit in the past year.
- 63.1% of all Arizonans reported consuming fewer than five servings of fruits and vegetables each day.
- 44.6% of Arizona females of childbearing age reported that they did not know that folic acid prevents birth defects.
- 59.3% of respondents correctly responded that folic acid prevents birth defects.
- 20.8% of persons reported that they have been told by a doctor that they have arthritis.
- 17.6% of Arizona adults reported they are limited in activities due to impairments or health problems.
- 59.8% of male respondents 50 years of age or older reported having a PSA blood test.

SUMMARY OF TRENDS

Risk Factor	1993	1994	1995	1996	1997	1998	1999	2000
Percent of Arizona Adults who								
Did NOT have health care coverage	16.8	14.1	15.2	16.9	14.6	13.1	14.1	17.1
Had ever been told by a doctor that they have diabetes	3.2	3.5	4.8	3.5	3.1	2.8	4.3	5.9
Did not have their blood pressure checked by a doctor, nurse or health professional within the past two years	5.7	N/A	6.9	N/A	7.0	N/A	8.8	N/A
Had their blood pressure checked and told their blood pressure was high	18.2	N/A	20.4	N/A	16.3	N/A	14.1	N/A
Never had their cholesterol checked	27.3	N/A	26.8	N/A	28.6	N/A	22.6	N/A
Reported weights that exceed BMI (Body Mass Index) limits for obesity (BMI \geq 30)	20.2	23.1	24.5	24.8	24.8	21.6	21.9	18.1
Smoked 100 cigarettes during their lifetime and who smoke now (regularly and/or irregularly)	20.7	23.0	22.9	23.7	21.0	21.8	20.0	18.5
Had five or more drinks on one or more occasions in the past month	10.2	12.2	13.5	13.5	8.8	N/A	8.7	N/A
Had on average 60 or more alcoholic drinks a month	2.3	2.9	2.4	4.9	2.6	N/A	4.4	N/A
Drove after having too much to drink one or more times in the past month	1.8	1.3	2.7	3.5	1.4	N/A	1.8	N/A
Consumed fewer than five servings of fruit and vegetables daily	79.3	76.4	75.7	75.7	82.8	90.9	69.7	63.1
Had NO dental visit in the past year	N/A	N/A	35.7	33.4	N/A	36.0	35.0	32.6
Had NOT been tested for HIV	66.1	55.4	51.2	53.4	67.3	65.0	N/A	56.9

Table I: 2000 Behavioral Risk Factor Survey: Risk Factor/Chronic Disease Prevalence, Percentage Within Demographic Groups

GROUPS	Risk Factor (Prevalence)						
	No Health Care Coverage	Diabetes	No Leisure-time Activity	Current Smoker	<5-A-Day Fruits/Vegetables	Overweight or obese (BMI)	* No Mammography
Sex							
Male	16.6	6.0	31.3	18.2	65.2	64.1	-
Female	17.4	5.8	36.8	18.8	61.1	42.0	10.5
Age							
18 - 24	30.3	-	31.6	22.2	69.6	32.7	-
25 - 34	28.8	.09	37.1	16.1	62.0	52.1	-
35 - 44	14.6	2.7	27.0	21.8	64.5	58.7	(40-44) 30.9
45 - 54	15.4	9.7	32.2	25.6	66.1	53.5	11.3
55 - 64	15.2	12.2	45.0	20.2	61.9	62.7	4.4
65+	1.9	11.7	34.9	6.8	57.2	55.3	5.5
Education							
Less than High School	34.4	6.0	59.0	21.1	56.7	57.7	10.1
High School Graduate or GED	24.7	9.3	41.9	25.7	68.0	49.7	11.5
Some College or Tech School	11.0	3.3	24.8	16.4	63.3	52.9	11.0
College Grad	7.3	5.0	25.1	11.3	59.5	54.6	8.2
Income							
< \$15,000	32.6	15.4	40.6	45.6	72.5	46.8	14.7
\$15,000 - \$24,999	34.8	6.3	52.9	17.4	55.3	53.2	10.8
\$25,000 - \$49,999	12.6	4.2	33.0	17.4	59.3	56.7	11.6
\$50,000 - \$74,999	4.5	3.5	16.3	20.6	69.9	56.9	12.4
>\$75,000	1.8	2.8	11.5	11.5	68.3	53.6	4.0
Unknown/Refused	17.6	8.4	40.3	12.8	66.1	44.0	8.6
Race							
White	11.1	6.5	27.1	19.9	66.2	52.3	8.9
Non-White	35.4	5.0	55.7	15.0	53.8	54.0	17.3
Ethnicity							
Hispanic	38.8	3.4	59.5	14.2	50.5	53.6	17.6
Non-Hispanic	11.3	6.7	27.3	19.8	66.5	52.7	9.1

* Among women 40 years of age or older. ** Among persons 18 - 64 years of age. □ > 1 year ago. □ Respondents 18-44 years of age.
 - = Not applicable ‡ Cell size < 8.

Table I (Cont.): 2000 Behavioral Risk Factor Survey: Risk Factor/Chronic Disease Prevalence, Percentage Within Demographic Groups

GROUPS	Risk Factor (Prevalence)						
	**Not HIV Tested	Dental Visit	Arthritis	Limited Activities	Folic Acid Awareness	Five A Day	PSA Blood Test
Sex							
Male	56.3	32.8	17.1	31.0	49.1	36.3	36.2
Female	57.4	32.5	23.3	41.6	30.2	34.8	-
Age							
18 - 24	58.2	34.6	4.1	48.8	39.6	25.8	-
25 - 34	43.2	33.3	3.5	24.4	37.6	26.5	-
35 - 44	55.4	28.7	14.1	31.2	42.2	37.5	-
45 - 54	59.8	26.9	21.6	31.4	-	43.4	53.5
55 - 64	75.9	37.9	31.6	41.5	-	35.8	31.5
65+	-	36.1	47.1	42.5	-	47.3	17.6
Education							
Less than High School	58.4	53.7	24.8	34.4	45.6	28.7	67.3
High School Graduate or GED	58.3	42.8	20.3	40.4	39.5	33.5	44.5
Some College or Tech School	58.8	26.1	21.1	37.6	39.7	36.7	29.3
College Grad	51.9	19.9	17.0	33.3	37.5	39.4	27.7
Income							
< \$15,000	40.2	68.4	40.8	54.9	43.1	34.7	71.6
\$15,000 - \$24,999	63.2	41.6	18.8	44.7	43.3	26.3	60.2
\$25,000 - \$49,999	56.8	33.3	17.7	24.4	41.6	33.0	52.7
\$50,000 - \$74,999	60.0	21.9	18.5	40.3	39.1	44.6	26.9
>\$75,000	49.8	13.6	16.2	30.5	29.5	42.6	23.4
Unknown/Refused	59.0	26.6	21.4	40.4	38.8	39.2	27.1
Race							
White	55.4	30.4	23.7	34.8	43.9	40.0	32.2
Non-White	60.9	38.4	12.3	32.0	54.2	44.5	31.0
Ethnicity							
Hispanic	59.7	37.8	10.3	50.4	31.3	19.7	58.1
Non-Hispanic	55.8	30.9	18.8	31.6	39.8	36.9	-

* Among women 40 years of age or older. ** Among persons 18 - 64 years of age. □ > 1 year ago. □ Respondents 18-44 years of age.
 - = Not applicable ‡ Cell size < 8.

RISK FACTORS/CHRONIC DISEASE TERM USAGE

Respondent	Adult Arizona residents 18 years of age or older. In some cases various subset(s) of this group may be used.
No Health Care Coverage	Respondents who reported that they did not have health care coverage.
Diabetes	Respondents who reported a doctor told them they had diabetes.
No Leisure-Time Activity	Respondents who reported that they did not participate in physical activity in the past month outside of normal work-related activities.
Current Smoking	Respondents who reported smoking 100 cigarettes during their lifetime and who smoke now (regularly or irregularly).
Fruits/Vegetables	Respondents who reported that they consumed fewer than five servings of fruits and vegetables daily.
Overweight	The CDC defines overweight as a Body Mass Index (BMI) ≥ 25 , and obesity as a BMI ≥ 30.0 . BMI is weight in kilograms divided by height in meters squared (W/H^2).
Mammography	Female respondents 40 years of age and older who reported that they never had a mammogram.
HIV/AIDS Testing	Respondents ages 18-64 years who reported that they have not been tested for HIV.
Dental Visit	Respondents who reported they have not had a dental visit in the past year.
Injury Control	<p>a) Respondents who reported that their oldest child “sometimes,” “seldom,” or “never” wore a bicycle helmet.</p> <p>b) Respondents who reported that they had not tested all of the smoke detectors in their home in the past year.</p>
Arthritis	Respondents who reported a doctor told them they had arthritis.
Limited Activities	Respondents who reported they were limited in any activities due to any impairment or health problems.
Folic Acid Awareness	Respondents aged 18-44 who reported a reason other than preventing birth defects as the reason experts recommend that women take folic acid.
Five A Day	Respondents who reported they had not heard of the program “Five A Day for Better Health.”
PSA Blood Test	Male respondents aged 50 years and over who reported that they had not had a PSA blood test.

INTRODUCTION

In 2000, 40,202 residents of Arizona died. The table below lists the top 12 causes of death of Arizona residents in 2000.

It is well known that much disease and injury morbidity and mortality are associated with high-risk behaviors. Behaviors that contribute to disease and death include cigarette smoking, lack of physical activity and alcohol consumption.¹ Measurements of the prevalence of behavioral risk factors serve as indicators for potential morbidity and mortality and also provide information on those most likely to engage in high-risk behaviors.

Arizona has participated in the BRFSS since 1982. Through a cooperative agreement with the Centers for Disease Control and Prevention (CDC), the Arizona Department of Health Services implements BRFSS as a method to collect annual data on health risk behaviors of adult residents, aged 18 and older, excluding institutionalized persons. The purpose of the BRFSS is to provide data that can be used to plan, implement, and monitor health promotion and disease prevention efforts in Arizona.

The Annual Survey Results portion of this report contains information on high-risk behaviors and chronic diseases that are surveyed each year. The Module Survey Results portion contains information on high-risk behaviors and chronic diseases that may not be surveyed each year. The State Added Questions Survey Results portion contains information on high-risk behaviors whose addition was requested by the Department.

2000 ARIZONA LEADING CAUSES OF DEATH

Rank	Cause of Death	Number of Deaths	Age-adjusted Mortality Rate ² per 100,000 persons	Percentage of Total Deaths
1	Diseases of Heart	10,430	206.1	25.9%
2	Malignant Neoplasms - Cancer	8,994	170.4	22.4%
3	Cerebrovascular Diseases	2,603	51.7	6.5%
4	Chronic Lower Respiratory Diseases	2,493	47.4	6.2%
5	Accidents (unintentional injury)	2,087	41.1	5.2%
6	Influenza and Pneumonia	1,201	24.4	3.0%
7	Alzheimer's Disease	1,046	21.8	2.6%
8	Diabetes	993	19.0	2.5%
9	Intentional self-harm (suicide)	737	14.6	1.8%
10	Chronic Liver Disease and Cirrhosis	645	12.8	1.6%
11	Nephritis, Nephritic Syndrome and Nephrosis	605	11.7	1.5%
12	Assault (homicide)	394	7.6	1.0

¹ The causes of death for 2000 are classified by ICD-10, replacing the Ninth Revision (ICD-9) used during 1979-1999.

² Adjusted to the 2000-projected U.S. population.

METHODOLOGY

A. SAMPLING DESIGN

The Arizona BRFs is a random sample telephone survey. Using disproportionate stratified sampling, random digit dialing, and a Computer Assisted Telephone Interviewing (CATI) system, the survey has the potential to represent 93% of all households in Arizona (i.e., those who have telephones according to QWest Communications data). A sample size of 2,700 interviews over a 12-month period was selected to achieve an acceptable 95% confidence interval of $\pm 3\%$ on risk factor prevalence estimates of the adult population. This means that the estimated prevalence of a given risk factor can be reliably projected across the total population of Arizona residents. Prevalence estimates of individual demographic variables, especially those that yield smaller sample sizes, do not achieve the same level of accuracy as the total sample. The response rate for this year's survey was 95.4%.

A demographic profile of the Arizona population is reported in Appendix I: 2000 Arizona Demographic Profile.

B. QUESTIONNAIRE

The questionnaire, designed through cooperative agreements with the CDC, was divided into four sections. The first section contained questions on health risk behavior; the second section contained demographic information; the third section contained optional modules; and the fourth section contained state-added questions. The optional modules selected for the 2000 Arizona BRFs include sections on diabetes, oral health; immunization, quality of life and care giving, and folic acid. State-added questions included series on prostate cancer, mental health, and osteoporosis.

A list of the survey's core and optional module sections is included in Appendix II: 2000 Arizona Behavioral Risk Factor Survey, Core and Optional Modules Listing. A full copy of the 2000 BRFs Questionnaire can be found in Appendix III: 2000 Behavioral Risk Factor Survey, Arizona Questionnaire.

C. CATI IMPLEMENTATION OF BRFs PROTOCOL

From January 2000 through July 2000, interviewers employed by the Department contacted residences from 9:00 a.m.–9:00 p.m. weekdays and from 8:30 a.m.– 4:00 p.m. Saturdays.

During August 2000 through December 2000 a private survey research corporation contracted by the Department contacted residences from 5 p.m.–9 p.m. weekdays and from 11 a.m.–7 p.m. Saturdays, and from 1 p.m.–9 p.m. Sundays. All telephone numbers released in each month's sample received at least fifteen attempts over a minimum four-day period, including at least three attempts during weekends and eight attempts during weekday evenings. Furthermore, selected respondents who were not able to complete the interview at the time of selection received a minimum of 10 callbacks during the interviewing period.

After a residence had been contacted, one adult (18 years of age or older) was randomly selected from all adults residing in the household to be interviewed. Interviews were collected during a two-week period each month.

D. DATA ANALYSIS

The data collected by the Department's Office of Chronic Disease and Epidemiology was compiled and weighted by the CDC. Weighted counts were based on the 2000 Arizona population to accurately reflect the population demographics. The weighting factor considered the number of adults and telephone lines in the household, cluster size, stratum size, and age/race/sex distribution of the general population. The weighting formula is described in Appendix IV: BRFSS Weighting Formula.

All analyses presented are based on cell size counts of at least eight cases. The demographic information that was collected and presented in these results includes sex, age, education, household income, race, and ethnicity. Comparisons between responses within demographic categories were analyzed for statistical significance at the $\alpha = .05$ level. Throughout the report, statistical difference is noted when analysis provides 95% confidence that the categories described are different.

Analysis for the table "2000 Behavioral Risk Factor Survey: Risk Factor Prevalence, Percentage Within Demographic Groups" was conducted by the CDC. This table presents the percentage prevalence of high-risk behavior within each demographic group for each of the 15 risk factors and two chronic diseases. The analysis of high-risk groups for the results of each section was conducted by the Office of Epidemiology and Statistics. These tables present the demographic information for persons reporting a high-risk behavior or chronic disease.

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I. ANNUAL SURVEY RESULTS: ANALYSIS OF HIGH-RISK GROUPS

A. HEALTH CARE COVERAGE

In the health care marketplace, consumers have experienced an increase in health care coverage costs. At the same time, many Americans who have coverage do not understand the basic elements of health plans. In addition, many consumers are demanding more information about physicians available in various plans and the services that are covered.

According to the 2000 Arizona BRFs, 17.1%* of all respondents reported that they did not currently have health care coverage (Figure I-A-1). This percentage represents a slight increase over the number of Arizonans reporting lack of health care coverage in 1999. Improving access to health care is a focus area of *Healthy Arizona 2010*, an initiative which sets a goal of increasing the proportion of Arizonans with health insurance to 90%.¹

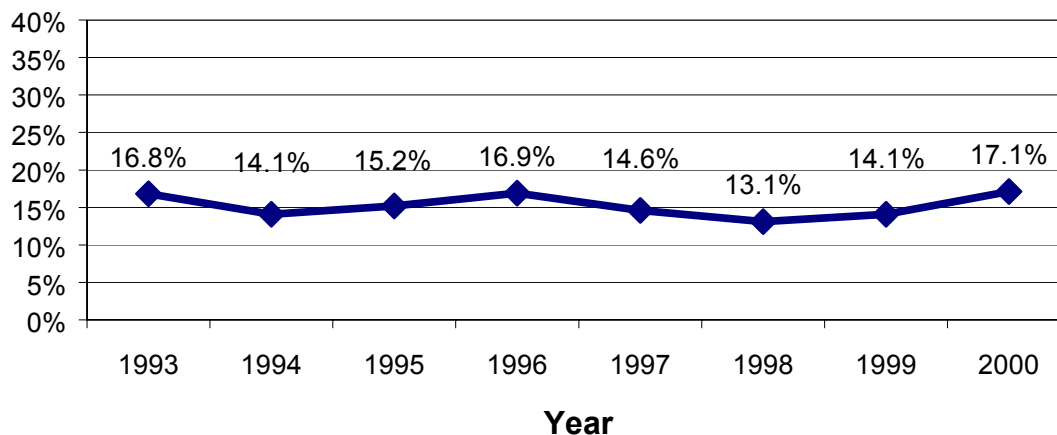


Figure I-A-1. *Percentage of BRFs respondents who reported they did not have health coverage in 1993-2000.*

While similar percentages of males (16.6%) and females (17.4%) lacked health care coverage, differences in coverage were evident among age, education, income, and race categories (Table I-A-1). Younger respondents, particularly those aged 18-24 (30.0%) and 25-34 (28.8%), were more likely to lack coverage than older respondents; approximately 15% of respondents aged 35-64 reported no health care coverage. Those aged 25-34 were more likely to lack coverage compared to 35-44 and 45-54 year-olds.[‡]

In addition, Arizonans with less education and lower incomes were more likely to lack health care coverage. Respondents with less than a high school education (34.4%) were more likely to lack coverage than those with some college or technical training (11%) and college graduates (7.3%). High school graduates (24.7%) were also less likely to have health care coverage than college graduates. Furthermore, respondents earning less than \$25,000 were also much more likely to lack health care coverage compared to their wealthier neighbors: nearly 35% of those

* 95% Confidence Interval: 14.2%-19.9%.

‡ Throughout this report, statistical significance is based on an alpha of .05. That is, statements about differences between groups can be made with 95% confidence.

with incomes between \$15,000-\$25,000 went without coverage, a larger proportion than was found among higher income categories.

Differences also appeared between race and ethnic groups. While over one-third (35.4%) of Non-White Arizonans lacked health care coverage, 11.1% of White Arizonans lacked coverage. Similarly, 38.8% of Hispanics were not covered by health care insurance, only 11.3% of White Non-Hispanics lacked health care coverage.

Reference

1. Arizona Department of Health Services, Arizona 2010: Collaborating for a Healthier Future, 2001.

2000 Arizona BRFs Characteristics of persons with no health care coverage		
GROUPS	WEIGHTED PERCENTAGE	UNWEIGHTED N
<u>Sex</u>		
Male	16.6	1087
Female	17.4	1593
<u>Age</u>		
18-24	30.3	257
25-34	28.8	476
35-44	14.6	475
45-54	15.4	477
55-64	15.2	352
65+	1.9	624
<u>Education</u>		
Less than High School	34.4	301
High School Graduate or GED	24.7	795
Some College or Tech School	11.0	888
College Grad	7.3	686
<u>Income</u>		
< \$15,000	32.6	188
\$15,000-\$24,999	34.8	609
\$25,000-\$49,999	12.6	850
\$50,000-\$74,999	4.5	304
>\$75,000	1.8	225
Unknown/Refused	17.6	504
<u>Race</u>		
White	11.1	2094
Non-White	35.4	556
<u>Ethnicity</u>		
Hispanic	38.8	456
Non-Hispanic	11.3	2204

Table I-A-1. 2000 BRFs results: characteristics of persons who reported that they did not have health care coverage.

B. DIABETES

“Diabetes is associated with long-term complications that affect almost every major part of the body. The disease often leads to blindness, heart and blood vessel disease, strokes, kidney failure, amputations, and nerve damage. Uncontrolled diabetes can complicate pregnancy, and birth defects are more common in babies born to women with diabetes.”¹

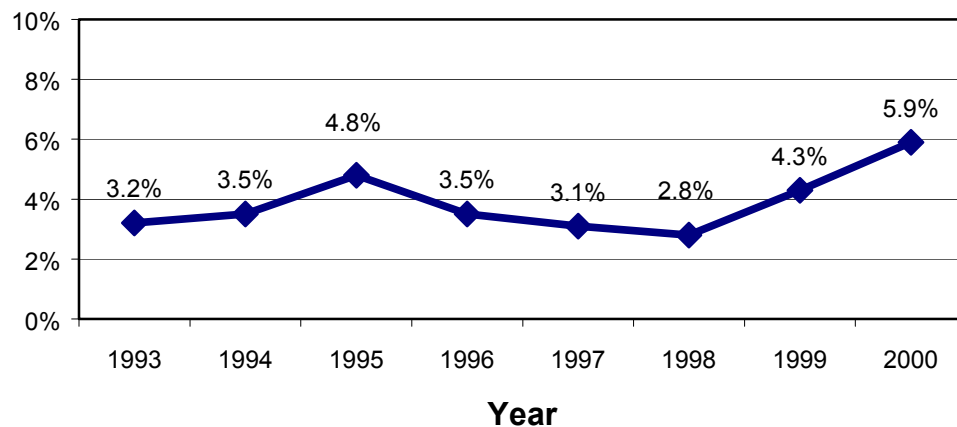


Figure I-B-1. Percentage of BRFs respondents who reported that they were told they had diabetes in 1993-2000. Note that *Healthy People 2000* Objective No. 17.11 is 2.5%.

According to the 2000 BRFs, 5.9%* of all respondents reported being told they had diabetes. This percentage, shown in Figure I-B-1, represents an increase over 1999, and is twice the percentage who reported being told they had diabetes in 1998. The figure exceeds the *Healthy People 2000* objective for diabetes incidence of 2.5%, as defined by the National Center for Health Statistics.²

While diabetes rates did not differ by gender, education, income, race, or ethnicity, clear differences did appear in age of respondents (see Table I-B-1). While less than 3% of those aged 35-44 were told they had diabetes, 9.7% of those aged 45-54 and 11.7 % of those aged 65 or older reported being told they have diabetes.

As part of an optional module of the 2000 Arizona BRFs, diabetics were asked an additional series of questions pertaining to the control of their condition. Of those responding, 43.7% reported that they take insulin. When asked how often they checked their blood sugar level, 68.6% of the diabetics who took insulin stated “one or more times per day.”

* 95% Confidence Interval: 3.8%-8.0%.

Finally, the survey measured use of dilated eye exams among respondents with diabetes. *Healthy People 2000* Objective No. 17.23 set a goal of increasing to 70% the number of diabetics receiving annual dilated eye exams to detect treatable retinopathy.² Of the diabetics responding in the 2000 BRFSS survey, 72.7% reported receiving an annual dilated eye exam.

References

1. Diabetes Overview. National Diabetes Information Clearinghouse. Retrieved from World Wide Web July 24, 2001. <http://www.nih.gov/health/diabetes/pubs/dmover/dmover.htm>.
2. National Center for Health Statistics. *Healthy People 2000 Review*, 1997. Hyattsville, Maryland: Public Health Service. 1997.

2000 Arizona BRFs Characteristics of persons told they had diabetes		
GROUPS	WEIGHTED PERCENTAGE	UNWEIGHTED N
<u>Sex</u>		
Male	6.0	1087
Female	5.8	1593
<u>Age</u>		
18-24	--	257
25-34	0.9	476
35-44	2.7	475
45-54	9.7	477
55-64	12.2	352
65+	11.7	624
<u>Education</u>		
Less than High School	6.0	301
High School Graduate or GED	9.3	795
Some College or Tech School	3.3	888
College Grad	5.0	686
<u>Income</u>		
< \$15,000	15.4	188
\$15,000-\$24,999	6.3	609
\$25,000-\$49,999	4.2	850
\$50,000-\$74,999	3.5	304
> \$75,000	2.8	225
Unknown/Refused	8.4	504
<u>Race</u>		
White	6.5	2094
Non-White	5.0	556
<u>Ethnicity</u>		
Hispanic	3.4	456
Non-Hispanic	6.7	2204

Table I-B-1. 2000 BRFs results: characteristics of persons told that they had diabetes.
 -- =Not applicable.

C. LEISURE-TIME ACTIVITY

Physical activity and exercise are critical elements in the promotion of health. Age-appropriate exercise habits reduce the risk of hypertension, diabetes mellitus, colon cancer, osteoporosis, and immune system dysfunction.^{1,2} Regular exercise also can contribute to the functional independence of the elderly and improves the quality of life for people of all ages.³

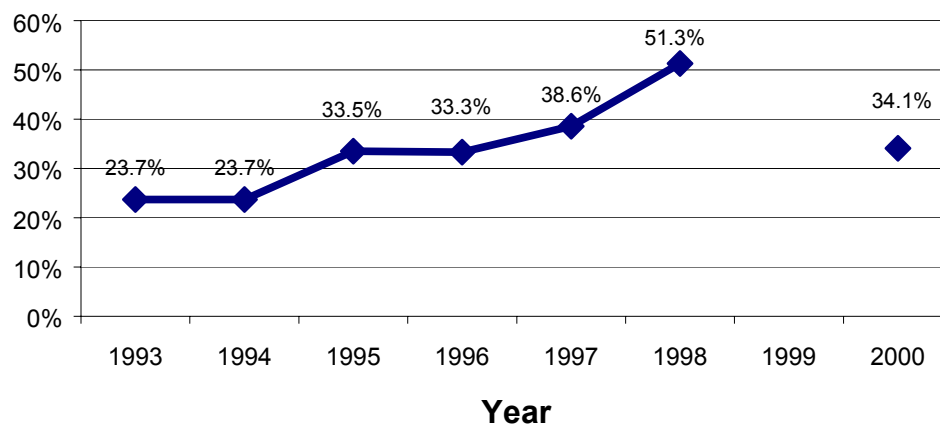


Figure I-C-1. *Percentage of BRFs respondents who reported no leisure-time physical activity in 1993-2000. Healthy People 2000 Objective 1.5 is less than 15.0%.*

Analysis of the 2000 Arizona BRFs indicated that 34.1%* of all respondents reported no leisure-time physical activity within the past thirty days (Figure I-C-1). While this percentage is a decrease from over 50% in 1998, the results fell short of the *Healthy People 2000* Objective of less than 15.0%.⁴

An examination of those who reported no leisure-time activity reveals slight differences between gender and age groups, but stark differences among education, income, and ethnic groups (Table I-C-1). Arizonans aged 35-44 were less likely to report no leisure-time activity (27%) than those slightly younger (25-34, 37.1%) and those somewhat older (55-64, 34.9%). Respondents with less than a high school education were more than twice as likely to report no leisure-time physical activity than college graduates (59% vs. 25.1%). High school graduates were also more likely to be inactive during leisure time (41.9%) compared to those with some college (24.85) or college grads (25.1%). Arizonans with incomes \$15,000-\$25,000 and \$25,000-50,000 were more likely to report no leisure-time activity than respondents in each higher income bracket. Whereas 52.9% of those making \$15,000-\$25,000 were inactive, only 16.3% of those making \$50,000-\$75,000 reported no leisure-time activity. Finally, Non-White Arizonans were more likely to be inactive during leisure time (55.7%), compared to White Arizonans (27.1%).

* 95% Confidence Interval: 30.8%-37.5%.

References

1. Siscovick DS, et al. Disease Specific Benefits and Risks of Physical Activities and Exercise. Public Health Reports, 1985; 100(2): 180-188.
2. Venjatraman JT, Fernandes G. Exercise, Immunity and Aging. Aging, 1997; 9(1-2): 42-56.
3. Katz S, Branch LG, Branson MH, et al. Active Life Expectancy. N Engl J Med, 1983; 309: 1218-1224.
4. National Center for Health Statistics. Healthy People 2000 Review, 1997. Hyattsville, Maryland: Public Health Service. 1997

2000 Arizona BRFs Characteristics of persons with no leisure-time activity		
GROUPS	WEIGHTED PERCENTAGE	UNWEIGHTED N
<u>Sex</u>		
Male	31.3	1087
Female	36.8	1593
<u>Age</u>		
18-24	31.6	257
25-34	37.1	476
35-44	27.0	475
45-54	32.2	477
55-64	45.0	352
65+	34.9	624
<u>Education</u>		
Less than High School	59.0	301
High School Graduate or GED	41.9	795
Some College or Tech School	24.8	888
College Grad	25.1	686
<u>Income</u>		
< \$15,000	40.6	188
\$15,000-\$24,999	52.9	609
\$25,000-\$49,999	33.0	850
\$50,000-\$74,999	16.3	304
>\$75,000	11.5	225
Unknown/Refused	40.3	504
<u>Race</u>		
White	27.1	2094
Non-White	55.7	556
<u>Ethnicity</u>		
Hispanic	59.9	456
Non-Hispanic	27.3	2204

Table I-C-1. 2000 BRFs results: characteristics of persons who reported that they did not participate in physical activity during the past thirty days.

D. CIGARETTE SMOKING

Tobacco use is responsible for one out of every five deaths in the United States.¹ Cigarette smoking is a major contributor to diseases such as lung cancer, oral cancer, and heart disease. Smoking is also found to be associated with depression, anxiety disorders, colon cancer, and in children of smokers, sudden infant death syndrome (SIDS).²⁻⁴ Clearly, smoking is an important public health issue. *Healthy People 2000* set a target of no more than 15% current smokers age 18 or older by 2000.⁵ According to the 2000 Arizona BRFs, 18.5%* of respondents identified themselves as current smokers. This percentage continues an overall downward trend since a high of 23.7% in 1996; and is down from 21.8% in 1998 and 20.0% in 1999 (Figure I-D-1). For the coming decade, *Healthy Arizona 2010* has identified tobacco use as one of its twelve focus areas, and has set a target of reducing adult smokers to 14% of the state population. Continued efforts to prevent initial smoking behavior in adolescents, as well as efforts to promote smoking cessation in current smokers, using techniques that have documented effectiveness, may decrease the rate of Arizona smokers to meet the *Healthy Arizona 2010* target.

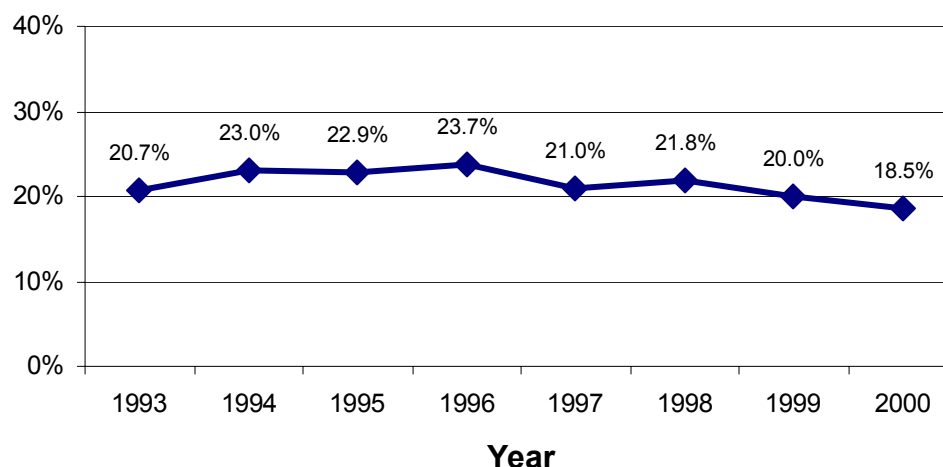


Figure I-D-1. Percentage of BRFs respondents who reported that they were current smokers in 1993-2000. *Healthy People 2000* Objective 3.4 was 15.0%.

A closer look at the 2000 BRFs results showed that men and women were equally likely to identify themselves as current smokers (18.2% and 18.8%, respectively). The most striking difference was found among income categories: the poorest Arizonans were more likely to smoke than their neighbors of any higher income category. Over 45% of those with incomes less than \$15,000 smoked, while less than half that amount in higher income categories identified themselves as current smokers.

* 95% Confidence Interval: 15.5%-21.6%.

High school graduates (or equivalent) were more likely to be current smokers (25.7%) than those with some college (16.4%), or college graduates (11.3%). Furthermore, older Arizonans – those over 65 – were less likely to smoke than those aged 25-64.

Reported smoking did not differ by race or ethnicity.

References

1. Centers for Disease Control and Prevention. Smoking-Attributable Mortality and Years of Potential Life Lost-United States, 1990. MMWR. 1993.
2. Slattery ML, Potter JD, Friedman GD, Ma KN, Edward S. Tobacco Use and Colon Cancer. Int J Cancer, 1997; 70 (3): 259 – 264.
3. Breslau N. Psychiatric Comorbidity of Smoking and Nicotine Dependence. Behav Genet, 1995; 25(2): 95-101.
4. Fact Sheet: Sudden Infant Death Syndrome. National Institutes of Child Health and Development. Retrieved from the World Wide Web July 24, 2001.
wysiwyg://35/http://nichd.nih.gov/publications/pubs/sidsfact.htm.
5. National Center for Health Statistics. Healthy People 2000 Review, 1997. Hyattsville, Maryland: Public Health Service. 1997.

2000 Arizona BRFs Characteristics of current smokers		
GROUPS	WEIGHTED PERCENTAGE	UNWEIGHTED N
<u>Sex</u>		
Male	18.2	1087
Female	18.8	1593
<u>Age</u>		
18-24	22.2	257
25-34	16.1	476
35-44	21.8	475
45-54	25.6	477
55-64	20.2	352
65+	6.8	624
<u>Education</u>		
Less than High School	21.1	301
High School Graduate or GED	25.7	795
Some College or Tech School	16.4	888
College Grad	11.3	686
<u>Income</u>		
< \$15,000	45.6	188
\$15,000-\$24,999	17.4	609
\$25,000-\$49,999	17.4	850
\$50,000-\$74,999	20.6	304
>\$75,000	11.5	225
Unknown/Refused	12.8	504
<u>Race</u>		
White	19.9	2094
Non-White	15.0	556
<u>Ethnicity</u>		
Hispanic	14.2	456
Non-Hispanic	19.8	2204

Table I-D-1. 2000 BRFs results: characteristics of persons who reported that they are current smokers and have smoked at least 100 cigarettes in their life.

E. FRUIT AND VEGETABLE CONSUMPTION

It has been known for many years that diet plays a large role in the quality of long-term health. Among adults who do not drink excessively or smoke, diet is the most controllable risk factor that determines their health status. It is widely accepted that a percentage of all cancer deaths can be attributed to poor diet habits.

One of the most important diet habits to follow is the consumption of at least five servings of fruits and vegetables per day. Analysis of the 2000 Arizona BRFS showed that 63.1%* of respondents reported that they consume less than five servings of fruits and vegetables per day (Figure I-E-1). This percentage continues a positive downward trend from a recent high of 90.0% of Arizonans who did not meet this standard in 1998. Despite this impressive progress, 63.1% still falls short of *Healthy People 2000* Objective 2.6, which set a target of decreasing the proportion of people consuming less than five fruits and vegetables per day to less than 50%.¹

Healthy People Arizona 2010 continues to stress the importance of vegetable consumption and sets a target of increasing the proportion of Arizonans aged two years and older who consume at least two daily servings of fruit and at least three daily servings of vegetables (with at least one-third being dark green or deep yellow vegetables) to at least 50%.²

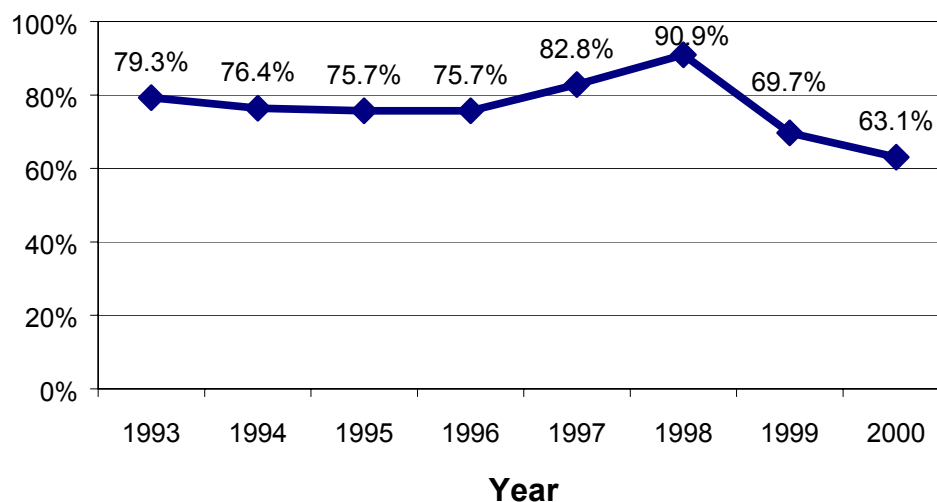


Figure I-E-1. Percentage of BRFSS respondents who reported that they consume less than five servings of fruits and vegetables per day in 1993-2000. *Healthy People 2000* Objective 2.6 is 50.0%.

* 95% Confidence Interval: 60.0%-66.2%.

Despite recent improvements, the current percentage of Arizonans failing to eat at least five fruits and vegetables per day calls for strong promotion of the benefits of consuming the proper quantity of fruits and vegetables if the *Healthy Arizona 2010* target is to be met.

Consumption of less than five servings of fruits and vegetables per day is not related to gender, age, or education — Arizonans scored equally poorly along these categories (Table I-E-1). The 2000 BRFS data showed a mixed result with respect to income categories: both those in the state making \$50,000-\$75,000 and those making under \$15,000 were less like to reach the five servings goal than those making \$15,000-\$25,000. Furthermore, Whites (66.2%) and Non-Hispanics (66.5%) were more likely to not eat five servings of fruit and vegetables per day, compared to Non-Whites (53.8%) and Hispanics (50.5%), respectively.

These results suggest that efforts at educating the state population about the importance of eating five servings of fruits and vegetables each day be targeted throughout the population, regardless of demographic categories.

References

1. National Center for Health Statistics. Healthy People 2000 Review, 1997. Hyattsville, Maryland: Public Health Service. 1997
2. Arizona Department of Health Services, Arizona 2010: Collaborating for a Healthier Future, 2001.

2000 Arizona BRFs Characteristics of persons not consuming at least five servings of fruits and vegetables per day		
GROUPS	WEIGHTED PERCENTAGE	UNWEIGHTED N
<u>Sex</u>		
Male	65.2	1087
Female	61.1	1593
<u>Age</u>		
18-24	69.6	257
25-34	62.0	476
35-44	64.5	475
45-54	66.1	477
55-64	61.9	352
65+	57.2	624
<u>Education</u>		
Less than High School	56.7	301
High School Graduate or GED	68.0	795
Some College or Tech School	63.3	888
College Grad	59.5	686
<u>Income</u>		
<\$15,000	72.5	188
\$15,000-\$24,999	55.3	609
\$25,000-\$49,999	59.3	850
\$50,000-\$74,999	69.9	304
> \$75,000	68.3	225
Unknown/Refused	66.1	504
<u>Race</u>		
White	66.2	2094
Non-White	53.8	556
<u>Ethnicity</u>		
Hispanic	50.5	456
Non-Hispanic	66.5	2204

Table I-E-1. 2000 BRFs survey results: characteristics of persons who reported that they did not consume at least five servings of fruits and vegetables per day.

F. OVERWEIGHT (BMI)

During the past ten years, increases in the prevalence of obesity have been documented. In the United States more than one-half of adults are overweight and nearly one-quarter are obese.¹ The body mass index (BMI) is a relationship between weight and height and is used to determine obesity and assess health risk. BMI is calculated using the following formula:

$$(\text{pounds} * 0.454) \div (\text{inches} * 0.0254)^2 \text{ or } (\text{Kg/M}^2).$$

According to the 2000 Arizona BRFS, 18.1%* of respondents exceeded the BMI standard for obesity, defined as a BMI ≥ 30.0 (Figure I-F-1). This figure was the lowest in eight years, and continued a downward trend from a high of 24.8% in 1996 and 1997. However, the 2000 results showed that over 50% of Arizonans were either overweight or obese (BMI ≥ 25). *Healthy People 2000* Objective 1.2 set a goal of reducing overweight BMIs to a prevalence of <20% among adults 20 years of age or older (defined as a BMI ≥ 27.8 for men and a BMI ≥ 27.3 for women) and no more than 15% among adults aged 12-19 years of age (defined as a BMI ≥ 25.8 for men and a BMI ≥ 25.7 for women).²

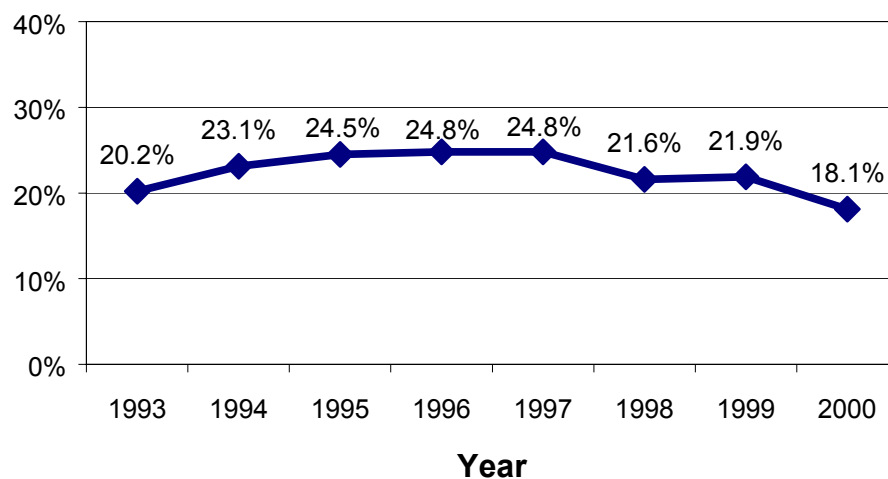


Figure I-F-1. 1993-2000 percent of BRFs respondents who reported weights which exceed BMI limits. *Healthy People 2000* Objective 1.2 was 20.0%.

Of those who met the definition of either overweight or obese, few differences were found among demographic groups (Table I-F-1). In the Arizona population, men were more likely to be overweight or obese than women (64.1% vs. 42.0%). Also, younger Arizonans, those aged 18-24, were less likely to be overweight or obese compared to those in all older age categories.

* 95% Confidence Interval: 15.3%-20.9%.

As with promoting increased servings of fruits and vegetables, it will be important to focus efforts to reduce overweight and obesity on all segments of the Arizona population. Such efforts are particularly needed, given that obesity substantially raises the risk of morbidity from hypertension, dyslipidemia, type 2 diabetes, coronary heart disease, stroke, gallbladder disease, osteoarthritis; sleep apnea and respiratory problems; and endometrial, breast, prostate, and colon cancers.³

References

1. Statistics Related to Overweight and Obesity. National Institute of Diabetes and Digestive and Kidney Diseases: Weight Control Information Network. Retrieved from the World Wide Web July 24, 2001. <http://www.niddk.nih.gov/health/nutrit/pubs/ststobes.htm>.
2. National Center for Health Statistics. Healthy People 2000 Review, 1997. Hyattsville, Maryland: Public Health Service. 1997.
3. Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults. National Institutes of Health, National Heart, Lung, and Blood Institute. Preprint June 1998.

2000 Arizona BRFs Characteristics of overweight or obese persons		
GROUPS	WEIGHTED PERCENTAGE	UNWEIGHTED N
<u>Sex</u>		
Male	64.1	1087
Female	42.0	1593
<u>Age</u>		
18-24	32.7	257
25-34	52.1	476
35-44	58.7	475
45-54	53.5	477
55-64	62.7	352
65+	55.3	624
<u>Education</u>		
Less than High School	57.7	301
High School Graduate or GED	49.7	795
Some College or Tech School	52.9	888
College Grad	54.6	686
<u>Income</u>		
< \$15,000	46.8	188
\$15,000-\$24,999	53.2	609
\$25,000-\$49,999	56.7	850
\$50,000-\$74,999	56.9	304
> \$75,000	53.6	225
Unknown/Refused	44.0	504
<u>Race</u>		
White	52.3	2094
Non-White	54.0	556
<u>Ethnicity</u>		
Hispanic	53.6	456
Non-Hispanic	52.7	2204

Table I-F-1. 2000 BRFs results: characteristics of persons classified as overweight or obese, defined as BMI > 25.0.

G. WOMEN'S HEALTH: ROUTINE MAMMOGRAPHY

The key to reduction in breast cancer mortality is dependent upon successful treatments and early detection. Routine mammography is a critical tool for breast cancer detection. Currently, the American Cancer Society recommends mammography in women ages 40-49, while the National Cancer Institute recommends that women discuss mammography with their physician. The benefits of obtaining routine mammograms are the ability of this test to detect tumors smaller than would be detectable using a self-breast exam. Small tumors are more likely to be associated with an early stage of breast cancer and therefore respond better to treatment.

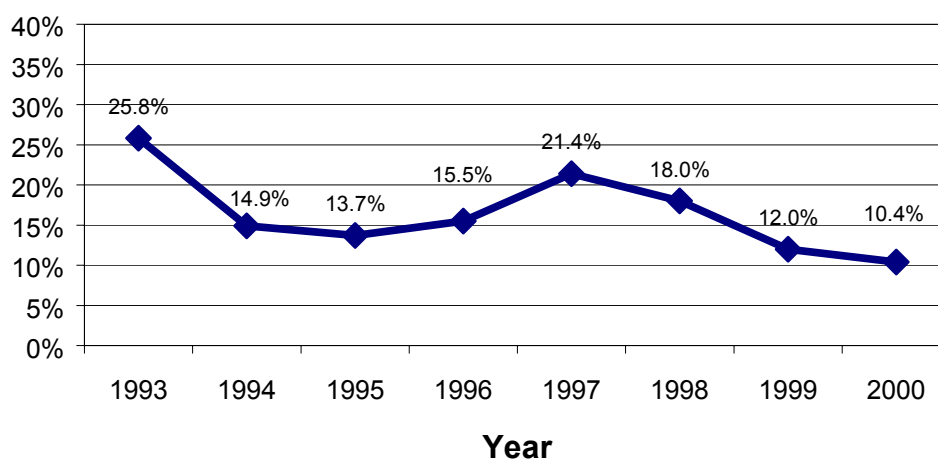


Figure I-G-1. *Percentage of BRFs female respondents 40 years of age or older who reported they never had a mammogram in 1993-2000.*

Analysis of the 2000 Arizona BRFs showed that 10.4%* of females 40 years of age or older responded that they had never had a mammogram. This figure was the lowest in seven years, and represented the third year of downward trend from a high of 21.4% in 1997.

Table I-G-1 shows that women in their early 40s are the least likely to have had a mammogram. While nearly 20% of women aged 40-49 never had a mammogram, the percentage drops to 10.1% of those aged 50-59, and only 4.4% of those aged 60-69 – a difference. A difference was also noted between each end of the income spectrum: Women earning less than 15,000 were more likely not to have had a mammogram compared to those with incomes over \$75,000 (14.7% compared to 4.0%). No differences among education, race, or ethnic groups were found.

Most breast cancers are discovered by women through self-breast exam. Unfortunately, one-third of these women will wait at least three months before seeking treatment. Reasons for delayed medical care include interpretation of symptoms as non-threatening, and economic limitations to

* 95% Confidence Interval: 7.4%-13.3%.

accessing services.¹ Removal of these barriers is essential for successful breast cancer treatment. Like other health behaviors, efforts to increase mammography must be emphasized to all segments of Arizona's female population.

Reference

1. Facione NC, Dodd MJ, Holzemer W, Meleis AI. Helpseeking for Self-Discovered Breast Symptoms. Implications for Early Detection. *Cancer Pract.*, 1997; 5(4): 220-227.

2000 Arizona BRFS		
Characteristics of women who have never had a mammogram		
GROUPS	WEIGHTED PERCENTAGE	UNWEIGHTED N
<u>Sex</u>		
Male	--	--
Female	10.4	1024
<u>Age</u>		
18-24	--	--
25-35	--	--
40-44	30.9	124
45-54	11.3	297
55-64	4.3	209
65+	5.5	379
<u>Education</u>		
Less than High School	10.1	126
High School Graduate or GED	11.5	321
Some College or Tech School	11.0	329
College Grad	8.2	241
<u>Income</u>		
< \$15,000	14.7	83
\$15,000-\$24,999	10.8	230
\$25,000-\$49,999	11.6	296
\$50,000-\$74,999	12.4	96
>\$75,000	4.0	73
Unknown/Refused	8.6	246
<u>Race</u>		
White	8.9	873
Non-White	17.3	143
<u>Ethnicity</u>		
Hispanic	17.6	122
Non-Hispanic	9.1	897

Table I-G-1. 2000 BRFS results: characteristics of women 40 year of age or older, who reported that they never had a mammogram.

-- =Not applicable.

H. WOMEN'S HEALTH: ROUTINE PAP SMEAR

The most effective method of diagnosing pre-cancerous conditions (cervical dysplasia) and localized early stage cervical cancer is effective routine screening of all women using Pap smear testing. Routine screening programs using Pap smear testing can reduce incidence and, thus, mortality, of cervical cancer by 93%.¹

The Human Papilloma Virus (HPV), a sexually transmitted disease associated with cervical cancer, can also be detected with a Pap smear test.² Increased awareness of the importance of receiving annual Pap smear tests is essential for all women, but especially for women who might be at increased risk for HPV.

Arizona 2000 BRFSS results showed that 6.1%* of women have never had a Pap smear test. This percentage continued a decline for the past two years from a high of 17.1% in 1997 (Figure I-H-1). The percentage is about equal to that in 1995. The 2000 result fell short of the *Healthy People 2000* objective of 5.0%.

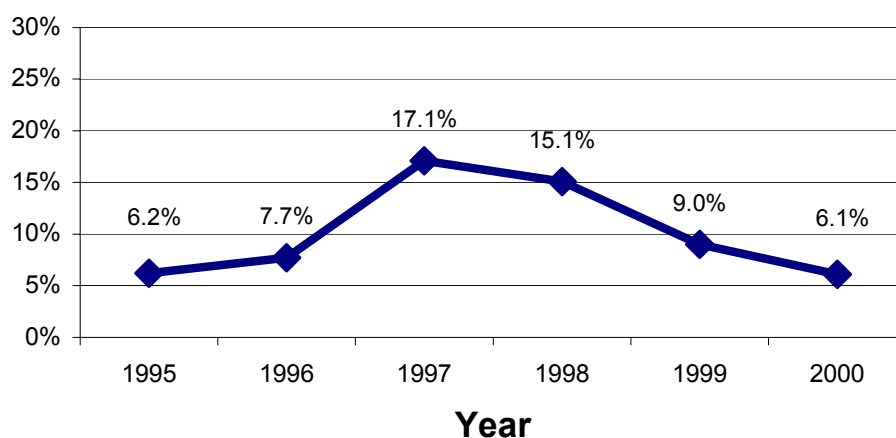


Figure I-H-1: Percentage of women age 18 and older who reported never having a Pap smear test in 1993-2000.

Age was not related to whether or not women had a Pap smear. However, education, income, race, and ethnicity showed differences among the Arizonan population. Women with less than a high school education were more likely not to have had Pap smear tests (17.6%) compared to high school graduates (4.5%) or women with some college or technical training (3.5%). Women in the lowest two income categories were also more likely never to have had the test (<\$15,000: 7.0%, \$15,000-\$25,000: 10.6%), compared to women in the highest two income categories (\$50,000-75,000: 0.6%, over \$75,000: 1.1%). Non-White women were more likely not to have

* 95% Confidence Interval: 7.4%-13.3%.

had a Pap smear (12.7%), compared to White women (3.4%). In addition, Hispanic women were less likely to have received the test (11.7%) than Non-Hispanic women (4.1%).

References

1. Eddy DM. Screening for Cervical Cancer. *Annals Internal Medicine* 1990, vol.113, pgs. 214-226.
2. Cervical Cancer Resource Center, American Cancer Society, Atlanta, GA, 2000.

2000 Arizona BRFs Characteristics of woman who have never had a Pap smear test		
GROUPS	WEIGHTED PERCENTAGE	UNWEIGHTED N
<u>Sex</u>		
Male	--	--
Female	6.1	1161
<u>Age</u>		
18-24	9.9	141
25-34	6.5	274
40-44	3.9	233
45-54	4.1	208
55-64	6.4	111
65+	7.4	185
<u>Education</u>		
Less than High School	17.6	128
High School Graduate or GED	4.5	357
Some College or Tech School	3.5	369
College Grad	5.5	303
<u>Income</u>		
< \$15,000	7.0	82
\$15,000-\$24,999	10.6	286
\$25,000-\$49,999	3.4	369
\$50,000-\$74,999	0.6	115
> \$75,000	1.1	96
Unknown/Refused	12.0	213
<u>Race</u>		
White	3.4	882
Non-White	12.7	270
<u>Ethnicity</u>		
Hispanic	11.7	229
Non-Hispanic	4.1	928

Table I-H-1. 2000 BRFs results: characteristics of women 18 year of age or older with an intact cervix who reported that they never had a Pap smear.

-- =Not applicable.

II
MODULE SURVEY RESULTS:
ANALYSIS OF HIGH RISK GROUPS

A. ORAL HEALTH

About 30,000 Americans are diagnosed with oral and throat cancers annually. There are also more than 8,000 deaths from both diseases each year.¹ Recently, the importance of oral health was emphasized in the U.S. Surgeon General's Report on Oral Health, released in 2000.² *Healthy Arizona 2010* includes the objective of increasing the proportion of children and adults who receive dental care each year.²

Results from the 2000 BRFs showed that 33.1%* of respondents had not had a dental visit within the past year (Figure II-A-1 and Figure II-A-2). This percentage is down slightly from 1999 (35%), but shows a fairly consistent trend of just over a third of the Arizona population not visiting the dentist each year. This percentage falls short of the *Healthy People 2000* goal of more than 70% of those age 35 and older receiving regular dental visits (within the past year).³

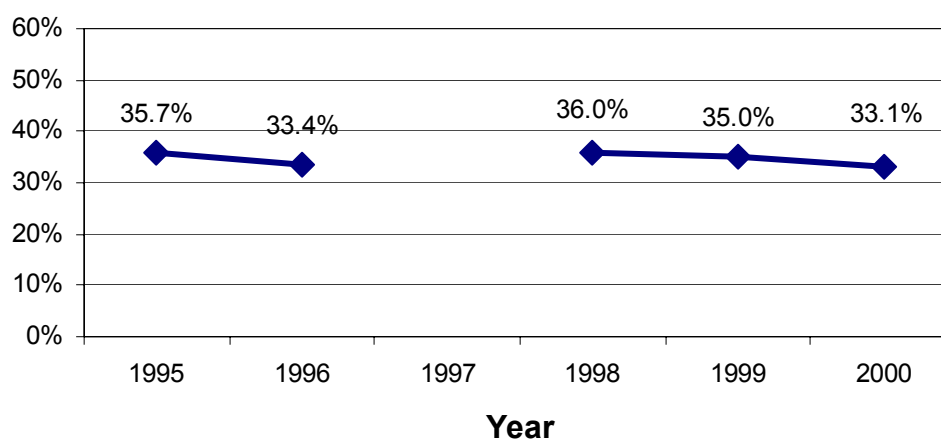


Figure II-A-1. 1995-2000 percentage of BRFs respondents who reported that they have not had a dental visit within the past year.

Table II-A-1 describes respondents who reported they did not have a dental visit in the past year. Likelihood of having visited the dentist in the past year was not related to gender, age, race, or ethnicity. However, Arizonans with incomes less than \$15,000 or \$15,000-\$25,000 were less likely to have visited the dentist in the past year than any higher income categories. Also, respondents with less than a high school education and high school graduates were more likely to have missed a visit to the dentist compared to those with some college or college graduates. These results can be illuminated with results from the 1998 BRFs, which also asked about dental insurance coverage. Of those responding to the 1998 BRFs, 52.4% reported that they had insurance covering some or all of their routine dental care. For respondents who did not visit the dentist in the previous year, 66.5% did not have dental insurance.

* 95% Confidence Interval: 29.7%-36.5%.

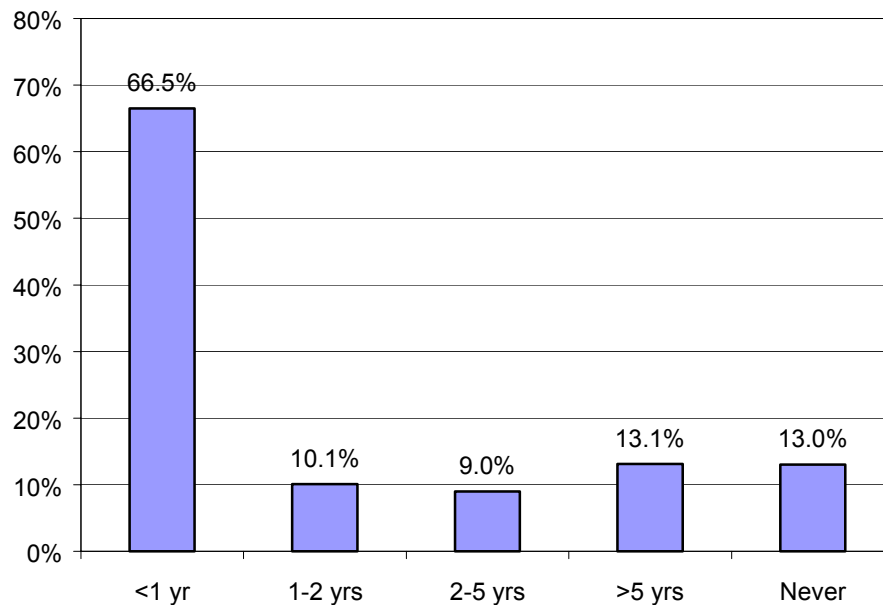


Figure II-A-2. Responses to the 2000 BRFSS question: How long has it been since you last visited the dentist?

References

1. Centers for Disease Control and Prevention. Improving Oral Health: Preventing Unnecessary Disease Among All Americans, At-A-Glance, 1999.
2. Arizona Department of Health Services. Arizona 2010: Collaborating for a Healthier Future. 2001.
3. Public Health Service. Healthy People 2000: National Health promotion and Disease Prevention Objectives—full report with commentary. Washington, D.C.: U.S. Department of Health and Human Services, 1991.

2000 Arizona BRFs Characteristics of respondents who did not visit the dentist or a dental clinic within past year		
GROUPS	WEIGHTED PERCENTAGE	UNWEIGHTED N
<u>Sex</u>		
Male	32.8	1086
Female	32.5	1593
<u>Age</u>		
18-24	34.6	257
25-34	33.3	476
35-44	28.7	475
45-54	26.9	476
55-64	37.9	352
65+	36.1	624
<u>Education</u>		
Less than High School	53.7	301
High School Graduate or GED	42.8	794
Some College or Tech School	26.1	888
College Grad	19.9	686
<u>Income</u>		
< \$15,000	68.4	188
\$15,000-\$24,999	41.6	609
\$25,000-\$49,999	33.3	849
\$50,000-\$74,999	21.9	304
▲\$75,000	13.6	225
Unknown/Refused	26.6	504
<u>Race</u>		
White	30.4	2094
Non-White	38.4	555
<u>Ethnicity</u>		
Hispanic	37.8	456
Non-Hispanic	30.9	2203

Table II-A-1. 2000 BRFs survey results: Characteristics of respondents who did not visit the dentist or a dental clinic within the past year.

B. ARTHRITIS AND QUALITY OF LIFE

The leading causes of disability in this country are arthritis and other rheumatic conditions. In 1992 these maladies affected 42.7 million people and cost \$65 billion. As the Baby Boomer generation ages, these numbers will increase.¹

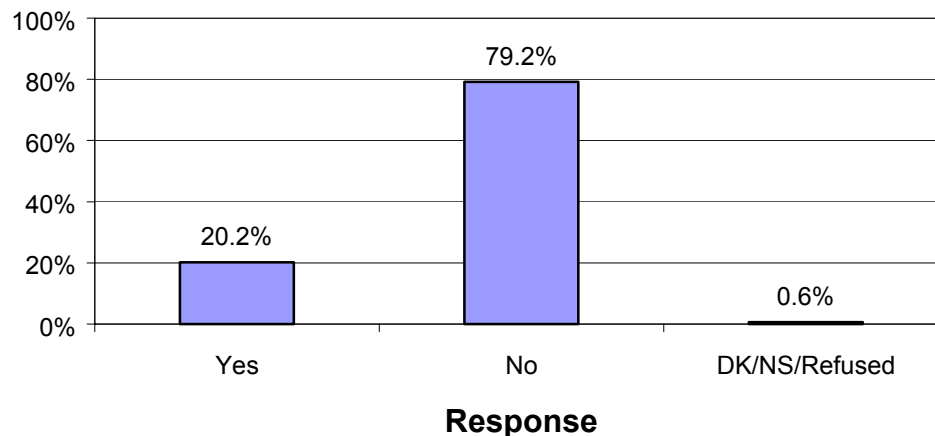


Figure II-B-1: 2000 Arizona BRFS: Have you ever been told by a doctor that you have arthritis?

Approximately 20%* of Arizonans have been told by a doctor that they have arthritis (Figure II-B-1). While slightly more women have been told they have arthritis than men (23.3% vs. 17.1%), this result is not statistically different. Clearly, this condition affects both sexes. As expected, those in older age categories are more likely to have been diagnosed with arthritis: 21.6% of those aged 45-54, 31.6% of those aged 55-64, and 47.1% of those over age 65 have been told they have the condition. While it appears that this diagnosis was much more likely among poorer respondents (over 40% of those with incomes less than \$15,000 reported being told they have arthritis, compared to less than 20% in higher income categories), the difference does not meet the requirements of statistical significance. However, the condition affected Non-Whites less than White respondents: 23.7% of White respondents had been diagnosed with arthritis, compared to 11.7% of Non-Whites; and 10.3% of Hispanics had been diagnosed compared to 23.1% of Non-Hispanics.

Increasing the length of healthy life for all Americans is one of the objectives contained in the *Healthy People 2010* program. The combination of public health programs, improved social conditions, and private medical care, have contributed to the lengthening of life expectancy from 47 years in 1900 to 75 years in 1989. However, increased life expectancy has included periods of lower health-related quality of life for some people.²

* 95% Confidence Interval: 17.4%-23.0%.

The 2000 Arizona BRFs asked respondents if they are limited in any activities because of impairment or health problems. Approximately 17%* responded that their activities were affected by health problems. Limited activities were more likely to be noted by older Arizonans, White Arizonans, and Non-Hispanic Arizonans.

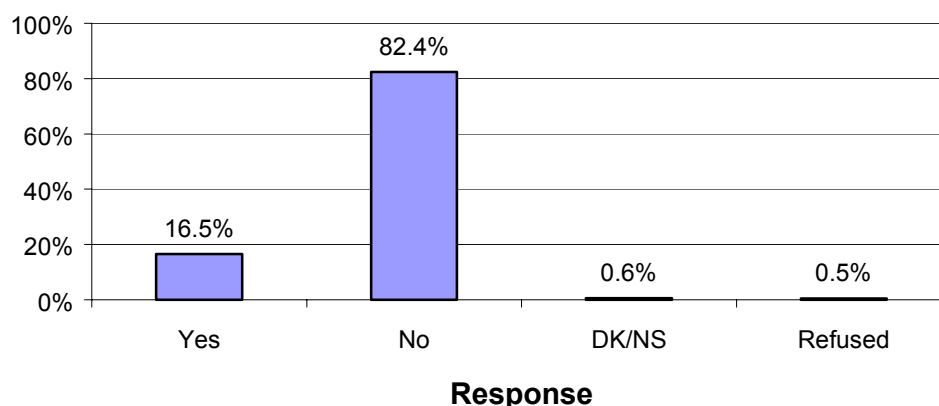


Figure II-B-2. 2000 Arizona BRFs: Are you limited in any way in any activities because of any impairment or health problems?

References

1. Centers for Disease Control and Prevention. CDC Surveillance Summaries, May 8, 1998 MMWR 1998 47 (No. 17).
2. Centers for Disease Control and Prevention. CDC Surveillance Summaries, May 27, 1994 MMWR 1994 43 (No. 20).

* 95% Confidence Interval: 13.8%-19.1%.

C. FOLIC ACID AWARENESS

Each year in the United States, approximately 4000 pregnancies are affected by neural tube defects (NTDs).¹ Studies have shown that up to 50% of NTDs such as spina bifida and anencephaly may be preventable through adequate intake of folic acid.² Folic acid is a B vitamin that helps form red blood cells and has been found to reduce the risks of certain types of birth defects, cancer, and cardiovascular disease. While folic acid is important for everyone's health, it is especially vital for women of childbearing age. The United States Public Health Service recommends that all women of childbearing age in the United States who are capable of becoming pregnant should consume 400 micrograms (mcg) of folic acid per day for the purpose of reducing their risk of having a pregnancy affected with a neural tube defect.³

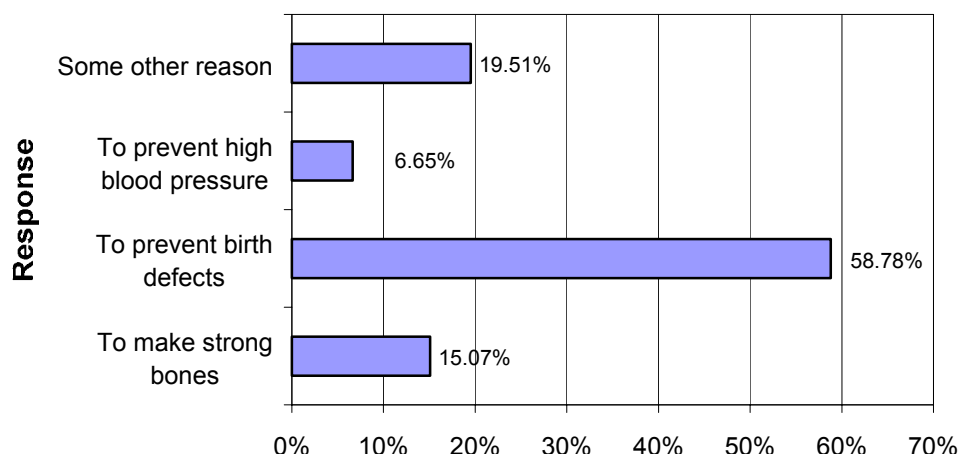


Figure II-C-1. Response to the 2000 BRFSS question: Why do health professionals suggest taking folic acid?

Healthy People Arizona 2010 has set an objective of increasing the proportion to 80% of pregnancies begun with an optimum folic acid intake (400 mcg).

Results from the 2000 BRFSS showed that when asked why health experts recommend that all women of childbearing age consume 400 mcg of folic acid daily, approximately 58.7% knew that folic acid may prevent birth defects (Figure II-C-1). Among women, 44.6% were aware of this benefit – a higher percentage than in 1999 (39.6%) (Figure II-C-2). The message about the importance of folic acid seemed to be reaching an increased number of Arizona's women. However, this result also suggests a continued need to educate Arizona residents about folic acid and the role it plays in healthy babies.

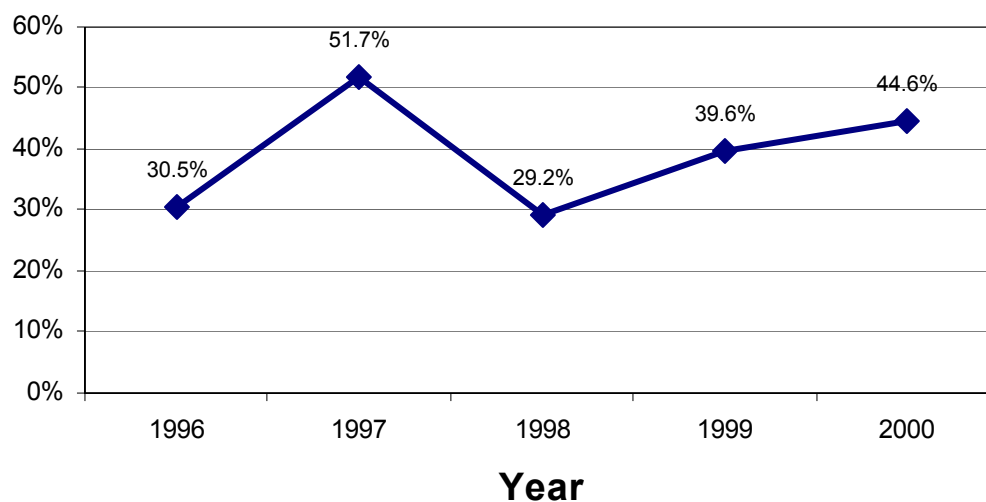


Figure II-C-2. *Percentage of BRFSS female respondents (18-44 years old) who reported that folic acid prevents birth defects in 1996-2000.*

A closer look at those respondents who reported not knowing that folic acid may prevent birth defects (Table II-C-1) showed awareness only differed among race and ethnic groups. Over 65% of Whites were unaware of this benefit, compared to 48.2% of Non-Whites; 66.4% of Non-Hispanics were unaware of folic acid's protective effects compared to 42.5% of Hispanics.

References

1. Centers for Disease Control and Prevention. CDC Surveillance Summaries, August 8, 1997. MMWR 1997; 46 (No. 31).
2. Rayburn WF, Stanley JR, Garrett ME. Periconceptional folate intake and neural tube defects. *Journal of the American College of Nutrition* 15(2): 121-5, 1996.
3. Centers for Disease Control and Prevention. CDC Surveillance Summaries, April 30, 1999. MMWR 1999; 48 (No. 16).

2000 Arizona BRFs Characteristics of respondents age (18-44) who did not know that folic acid prevented birth defects		
GROUPS	WEIGHTED PERCENTAGE	UNWEIGHTED N
<u>Sex</u>		
Male	63.6	519
Female	54.8	708
<u>Age</u>		
18-24	55.0	257
25-34	55.8	476
35-44	65.1	475
45-54	--	--
55-64	--	--
65+	--	--
<u>Education</u>		
Less than High School	53.2	138
High School Graduate or GED	64.0	371
Some College or Tech School	59.5	421
College Grad	55.1	293
<u>Income</u>		
< \$15,000	56.6	78
\$15,000-\$24,999	58.2	297
\$25,000-\$49,999	55.8	406
\$50,000-\$74,999	67.6	153
>\$75,000	55.3	101
Unknown/Refused	64.1	192
<u>Race</u>		
White	65.3	836
Non-White	48.2	378
<u>Ethnicity</u>		
Hispanic	42.5	307
Non-Hispanic	61.6	912

Table II-C-1. 2000 BRFs survey results: Characteristics of respondents aged (18-44) who did not know that folic acid prevented birth defects.

-- =Not applicable.

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III
STATE ADDED QUESTIONS SURVEY RESULTS:
ANALYSIS OF HIGH RISK GROUPS

A. PROSTATE CANCER SCREENING

Recent studies have demonstrated that the use of a prostate specific antigen (PSA) and transrectal ultrasound (TRUS) along with the digital rectal examination (DRE) may help in the early detection of prostate cancer.

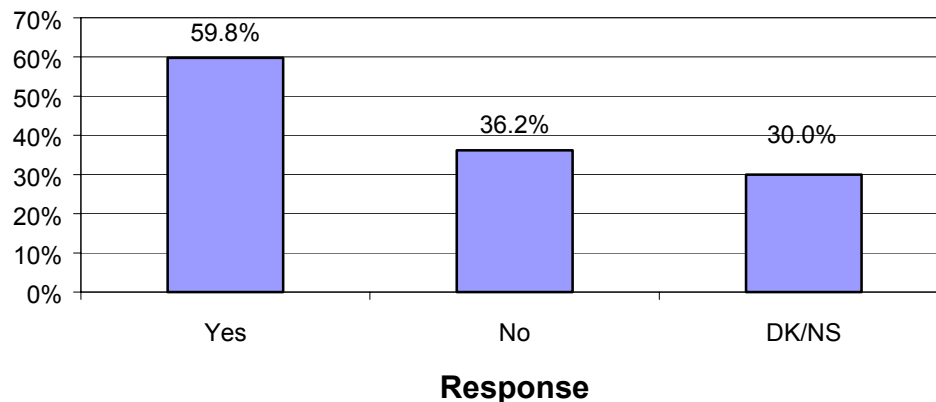


Figure III-A-1. Responses to the 2000 Arizona BRFSS question: Have you ever had a PSA blood test?

Male respondents who were at least 35 years of age were surveyed on whether they had a PSA blood test. Nearly 60.0%* responded that they had a PSA blood test (Figure III-A-1).

Older men were more likely to have had the PSA test (35.2% of those 35-44, 40.8% of those 45-54, 67% of those 55-64, and 75.6% of those 65 or older). While having had the test did not vary by education, men with incomes less than \$15,000 were less likely to have had the test (20.5%) than other income categories (for example, 65.6% of those making \$50,000-\$75,000). Test taking did not differ by race or ethnicity.

* 95% Confidence Interval: 51.1%-68.5%.

2000 Arizona BRFs Characteristics of persons who have had a PSA test		
GROUPS	WEIGHTED PERCENTAGE	UNWEIGHTED N
<u>Sex</u>		
Male	59.8	564
Female	--	--
<u>Age</u>		
35-44	35.2	44
45-54	40.8	131
55-64	67.0	143
65+	75.6	245
<u>Education</u>		
Less than High School	34.9	55
High School Graduate or GED	53.0	153
Some College or Tech School	66.5	183
College Grad	66.6	172
<u>Income</u>		
< \$15,000	20.5	32
\$15,000-\$24,999	62.0	116
\$25,000-\$49,999	56.9	181
\$50,000-\$74,999	65.6	66
>\$75,000	73.7	73
Unknown/Refused	69.7	96
<u>Race</u>		
White	63.2	486
Non-White	46.1	70
<u>Ethnicity</u>		
Hispanic	41.9	55
Non-Hispanic	62.5	502

Table III-A-1. 2000 BRFs survey results: characteristics of men over 35 who have had a PSA blood test.
 -- =Not applicable.

B. MENTAL HEALTH

Healthy Arizona 2010 selected mental health (and in particular, depression and related disorders) as one of the twelve areas of focus for the coming decade. Mental illness affects approximately one in five Americans, and costs the U.S. economy over \$43.7 billion in lost work, reduced productivity, and for treatment of the disease.¹ In 1997, Arizona ranked among the top three states for rate of suicide mortality among adolescents aged 15-19.¹ Treatment can help approximately 80% of those suffering from depression,¹ but increased diagnosis of the disease and efforts to reduce the stigma of depression are needed. *Healthy Arizona 2010* has set a target of no more than 10 suicides per 100,000.

The 2000 Arizona BFRS included an optional module of questions related to mental health. These data showed that about 2.4%* of the population considered attempting suicide. Of that number, about 4% required treatment for their attempt.

The 2000 Arizona BFRS also revealed that the state population was fairly evenly divided between those that felt “stressed” and those that did not (Figure III-B-1). Nearly 18% of Arizonans report experiencing “a lot of stress” during the past year, while an additional 30% reported a moderate amount of stress. However, about 30% reported relatively little stress, and 20% reported almost no stress.

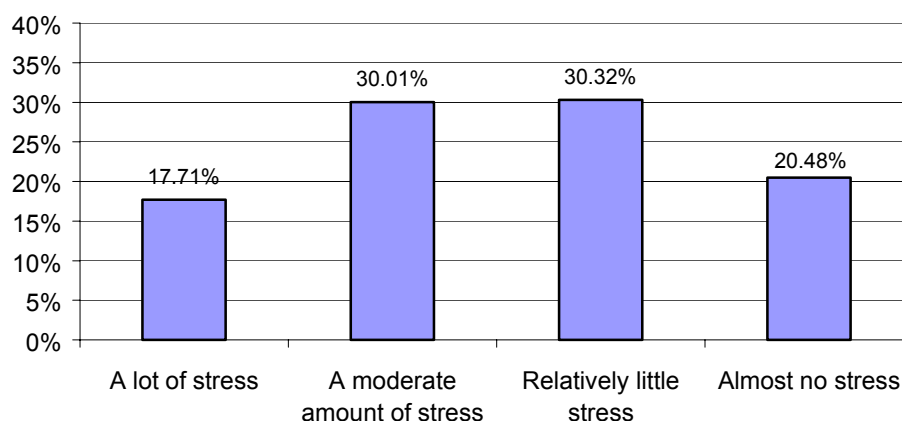


Figure III-B-1. Responses to the 2000 Arizona BFRS question about the amount of stress experienced in the last year.

A closer examination of those reporting a lot of stress experienced in the last year showed that a larger percentage of women reported a lot of stress in their lives, compared to men (22.1% vs. 13.1%). The oldest Arizonans, those aged over 65, were less likely to feel a lot of stress than other age groups, but otherwise, stress was distributed evenly across age groups. In addition, those in the state with the lowest incomes, less than \$15,000, were more likely to experience a lot

* 95% Confidence Interval: 0.6%-4.1%.

of stress compared to their wealthier neighbors (42.1% vs. 20% or fewer for other income categories). Experiencing a lot of stress was not related to education, race, or ethnicity.

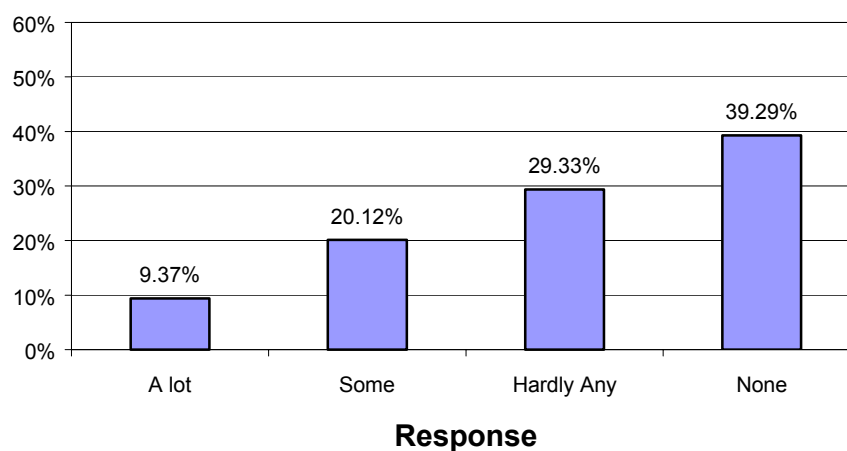


Figure III-B-2. Responses to the 2000 Arizona BRFSS question about the effect of stress on health during the past year.

Furthermore, nearly 30% of Arizonans reported that stress had either a lot or some effect on their health within the last year (Figure III-B-2). Two-thirds of the state population, however, felt that stress had hardly any, or no effect on their health.

Depression and related symptoms take a financial and human toll in Arizona. *Healthy Arizona 2010* outlines the following strategies for increasing diagnosis and improving treatment of depression in Arizona:¹

- address stigma of depression;
- promote closer integration of behavioral and public health;
- broaden awareness of depressive illness among primary care providers.

Reference

1. Arizona Department of Health Services. Arizona 2010: Collaborating for a Healthier Future. 2001.

2000 Arizona BRFs Characteristics of people who experienced “a lot” of stress within the past year		
GROUPS	WEIGHTED PERCENTAGE	UNWEIGHTED N
<u>Sex</u>		
Male	13.1	1086
Female	22.1	1593
<u>Age</u>		
18-24	26.7	257
25-34	16.9	476
35-44	20.5	475
45-54	21.2	476
55-64	14.3	352
65+	7.7	624
<u>Education</u>		
Less than High School	13.0	301
High School Graduate or GED	20.7	794
Some College or Tech School	18.7	888
College Grad	15.1	686
<u>Income</u>		
< \$15,000	42.1	188
\$15,000-\$24,999	20.6	609
\$25,000-\$49,999	15.0	849
\$50,000-\$74,999	13.5	304
> \$75,000	19.2	225
Unknown/Refused	11.5	504
<u>Race</u>		
White	18.7	2094
Non-White	15.1	555
<u>Ethnicity</u>		
Hispanic	16.7	456
Non-Hispanic	17.9	2203

Table III-B-1. 2000 BRFs survey results: characteristics of people who reported experiencing a lot of stress during the last year.

C. OSTEOPOROSIS

The bone disease osteoporosis affects nearly 10 million Americans, and another 18 million are affected by low bone mass.¹ Calcium plays a critical role in the development and maintenance of bone tissue, and insufficient calcium intake can affect bone health.¹ Some risk factors for osteoporosis include smoking, eating disorders, low amount of calcium in the diet, heavy alcohol consumption, and use of certain medications.¹

The 2000 Arizona BRFs included a series of questions for women about calcium consumption, weight-bearing exercise, and bone-density testing. Over half (53.1%)* of Arizonans consume less than two servings of milk or milk products per day, an important source of calcium (Figure III-C-1).

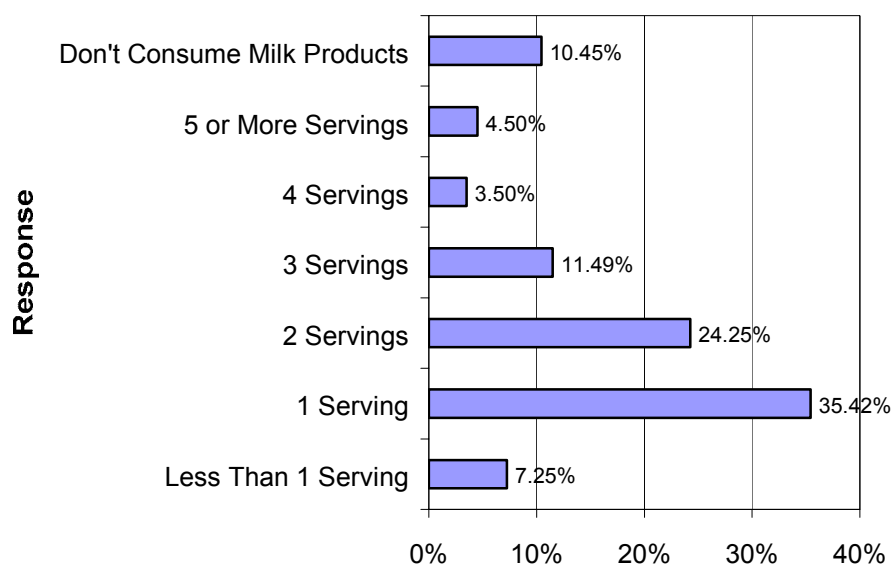


Figure III-C-1. 2000 Arizona BRFs: number of servings of milk or milk products consumed per day.

Table III-C-3 presents the characteristics of women who consumed less than two servings of milk or milk products per day. No differences were found among age, education, race, or ethnic categories. BRFs results did show that Arizona's poorest women were more likely to eat fewer milk products than women with slightly higher incomes (<\$15,000, 70.2%; \$15,000-\$25,999, 49.0%).

These results suggested that women across the state may be at increased risk for developing osteoporosis, due to insufficient calcium consumption. In order to detect the disease, a bone density scan is recommended for all women over 65, and for those younger than 65 with

* 95% Confidence Interval: 47.7%-58.6%.

additional risk factors. Figure III-C-2 shows that 24% of women have received this important test.

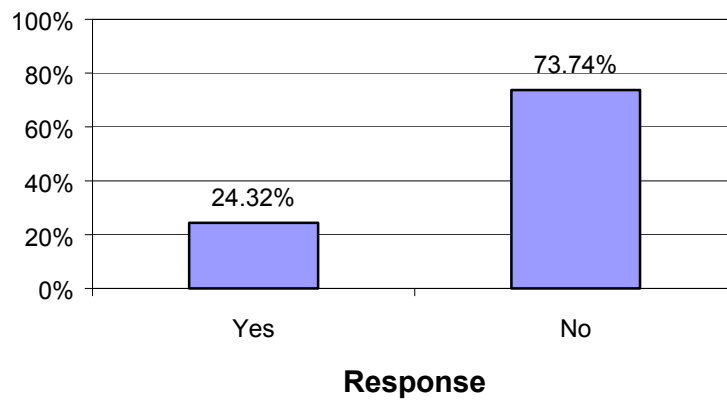


Figure III-C-2. Percentage of women who reported receiving a bone density test in 2000.

Reference

1. National Institutes of Health. MEDLINEplus Medical Encyclopedia: Osteoporosis. Retrieved from the World Wide Web July 24, 2001.
<http://medlineplus.nlm.nih.gov/medlineplus/ency/article/000360.htm>.

2000 Arizona BRFs Characteristics of women who consumed less than two servings of milk or milk products per day		
GROUPS	WEIGHTED PERCENTAGE	UNWEIGHTED N
<u>Sex</u>		
Male	--	--
Female	53.1	1210
<u>Age</u>		
18-24	60.8	78
25-34	40.4	161
35-44	52.0	157
45-54	47.6	211
55-64	61.6	209
65+	54.0	379
<u>Education</u>		
Less than High School	44.2	148
High School Graduate or GED	57.2	387
Some College or Tech School	51.3	376
College Grad	54.5	292
<u>Income</u>		
< \$15,000	70.2	94
\$15,000-\$24,999	49.0	299
\$25,000-\$49,999	53.3	362
\$50,000-\$74,999	53.2	112
> \$75,000	46.4	71
Unknown/Refused	53.1	272
<u>Race</u>		
White	52.5	972
Non-White	54.6	229
<u>Ethnicity</u>		
Hispanic	52.5	194
Non-Hispanic	53.2	1011

Table III-B-1. 2000 BRFs survey results: characteristics of women who consumed less than two servings of milk or milk products per day.

-- =Not applicable.

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APPENDIX I: Demographic Profile

2000 Arizona Demographic Profile		
GROUPS	WEIGHTED PERCENTAGE	UNWEIGHTED N
<u>Sex</u>		
Male	48.8	1087
Female	51.2	1593
<u>Age</u>		
18-24	12.7	257
25-34	19.0	476
35-44	20.6	475
45-54	17.0	477
55-64	11.7	352
65+	18.0	624
<u>Education</u>		
Less than High School	11.4	301
High School Graduate or GED	31.1	795
Some College or Tech School	31.8	888
College Grad	25.5	686
<u>Income</u>		
< \$15,000	7.4	188
\$15,000-\$24,999	19.7	609
\$25,000-\$49,999	31.0	850
\$50,000-\$74,999	14.6	304
▲\$75,000	10.2	225
Unknown/Refused	17.2	504
<u>Race</u>		
White	73.9	2094
Non-White	25.0	556
<u>Ethnicity</u>		
Hispanic	21.2	456
Non-Hispanic	77.9	2204

Source: 2000 Arizona BRFS Sample.

APPENDIX II:
2000 Arizona Behavioral Risk Factor Survey
Core, Optional, and State-Added Questions Listing

Listed below are the Core Sections, Optional Modules, and State Added questions that were used for the 2000 Arizona Behavioral Risk Factor Survey.

CORE SECTIONS

Section 1: Health Status
Section 2: Health Care Access
Section 3: Asthma
Section 4: Diabetes
Section 5: Care Giving
Section 6: Exercise
Section 7: Tobacco Use
Section 8: Fruits and Vegetables
Section 9: Weight Control
Section 10: Demographics
Section 11: Women's Health
Section 12: HIV/AIDS

OPTIONAL MODULES

Module 1: Diabetes
Module 6: Oral Health
Module 10: Immunization
Module 14: Arthritis
Module 15: Quality of Life and Care Giving
Module 16: Folic Acid

STATE ADDED QUESTIONS

Series 1: Prostate Cancer
Series 2: Mental Health
Series 3: Osteoporosis

Appendix III:
2000 Behavioral Risk Factor Survey
Arizona Questionnaire

Section 1: Health Status

1.1. Would you say that in general your health is:

- a. Excellent
- b. Very good
- c. Good
- d. Fair
- e. Poor
- f. Don't know/Not Sure
- g. Refused

1.2. Now thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good?

- a. Number of days
- b. None
- c. Don't know/Not sure
- d. Refused

1.3. Now thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?

- a. Number of days
- b. None
- c. Don't know/Not sure
- d. Refused

1.4. During the past 30 days, for about how many days did poor physical or mental health keep you from doing your usual activities, such as self-care, work, or recreation?

- a. Number of days
- b. None
- c. Don't know/Not sure
- d. Refused

Section 2: Health Care Access

2.1. Do you have any kind of health care coverage, including health insurance, prepaid plans such as HMOs, or government plans such as Medicare?

- a. Yes
- b. No
- c. Don't know/Not sure
- d. Refused

2.2. Medicare is a coverage plan for people 65 or over and for certain disabled people. Do you have Medicare?

- a. Yes
- b. No
- c. Don't know/not sure
- d. Refused

2.3. What type of health care coverage do you use to pay for most of your medical care?

Is it coverage through:

- a. Your employer
- b. Someone else's employer
- c. A plan that you or someone else buys on your own
- d. Medicare
- e. Medicaid or Medical Assistance
- f. The military, CHAMPUS, Tri Care, or the VA [**or CHAMP-VA**]
- g. The Indian Health Service [**or the Alaska Native Health Service**]
- h. Some other source
- i. None
- j. Don't know/Not sure
- k. Refused

2.3a. There are some types of coverage you may not have considered. Please tell me if you have any of the following:

Coverage through:

- a. Your employer
- b. Someone else's employer
- c. A plan that you or someone else buys on your own
- d. Medicare
- e. Medicaid or Medical Assistance [**or substitute state program name**]
- f. The military, CHAMPUS, Tri Care, or the VA [**or CHAMP-VA**]
- g. The Indian Health Service [**or the Alaska Native Health Service**]
- h. Some other source
- i. None
- j. Don't know/Not sure
- k. Refused

**Appendix III:
2000 Behavioral Risk Factor Survey
Arizona Questionnaire**

2.4. During the past 12 months, was there any time that you did not have any health insurance or coverage?

- a. Yes
- b. No
- c. Don't know/Not sure
- d. Refused

2.5. About how long has it been since you had health care coverage?

- a. Within the past 6 months (1 to 6 months)
- b. Within the past year (6 to 12 months ago)
- c. Within the past 2 years (1 to 2 years ago)
- d. Within the past 5 years (2 to 5 years ago)
- e. 5 or more years ago
- f. Don't know/Not sure
- g. Never
- h. Refused

2.6. Was there a time during the last 12 months when you needed to see a doctor, but could not because of the cost?

- a. Yes
- b. No
- c. Don't know/Not sure
- d. Refused

2.7. About how long has it been since you last visited a doctor for a routine checkup?

- a. Within the past year (1 to 12 months ago)
- b. Within the past 2 years (1 to 2 years ago)
- c. Within the past 5 years (2 to 5 years ago)
- d. 5 or more years ago
- e. Don't know/Not sure
- f. Never
- g. Refused

Section 3: Asthma

3.1 Did a doctor ever tell you that you had asthma?

- a. Yes
- b. No
- c. Don't know/Not sure
- d. Refused

3.2 Do you still have asthma?

- a. Yes
- b. No
- c. Don't know/Not sure
- d. Refused

Section 4: Diabetes

4.1. Have you ever been told by a doctor that you have diabetes?

- a. Yes
- b. Yes, but female told only during pregnancy
- c. No
- d. Don't know/Not sure
- e. Refused

Section 5: Care Giving

5.1. There are situations where people provide regular care or assistance to a family member or friend who is elderly or has a long-term illness or disability. During the past month, did you provide any such care or assistance to a family member or friend who is 60 years of age or older?

- a. Yes
- b. No
- c. Don't know/Not sure
- d. Refused

5.2. Who would you call to arrange short or long-term care in the home for an elderly relative or friend who was no longer able to care for themselves?

- a. Relative or friend
- b. Would provide care myself
- c. Nursing home
- d. Home health service
- e. Personal physician
- f. Area Agency on Aging
- g. Hospice
- h. Hospital nurse
- i. Minister/priest/rabbi
- j. Other
- k. Don't know who to call
- l. Refused

Section 6: Exercise

The next few questions are about exercise, recreation, or physical activities other than your regular job duties.

6.1. During the past month, did you participate in any physical activities or exercises such as running, calisthenics, golf, gardening, or walking for exercise?

- a. Yes
- b. No
- c. Don't know/Not sure
- d. Refused

**Appendix III:
2000 Behavioral Risk Factor Survey
Arizona Questionnaire**

6.2. What type of physical activity or exercise did you spend the most time doing during the past month?

Activity
Refused

6.3. How far did you usually walk/run/jog/swim?

Miles and tenths
Don't know/Not sure
Refused

6.4. How many times per week or per month did you take part in this activity during the past month?

a. Times per week
b. Times per month
c. Don't know/Not sure
d. Refused

6.5. And when you took part in this activity, for how many minutes or hours did you usually keep at it?

Hours and minutes
Don't know/Not sure
Refused

6.6. Was there another physical activity or exercise that you participated in during the last month?

a. Yes
b. No
c. Don't know/Not sure
d. Refused

6.7. What other type of physical activity gave you the next most exercise during the past month?

Activity
Refused

6.8. How far did you usually walk/run/jog/swim?

Miles and tenths
Don't know/Not sure
Refused

6.9. How many times per week or per month did you take part in this activity?

a. Times per week
b. Times per month
c. Don't know/Not sure
d. Refused

6.10. And when you took part in this activity, for how many minutes or hours did you usually keep at it?

Hours and minutes
Don't know/Not sure
Refused

Section 7: Tobacco Use

7.1. Have you smoked at least 100 cigarettes in your entire life?

a. Yes
b. No
c. Don't know/Not sure
d. Refused

7.2. Do you now smoke cigarettes everyday, some days, or not at all?

a. Everyday
b. Some days
c. Not at all
d. Refused

7.3. On the average, about how many cigarettes a day do you now smoke?

Number of cigarettes
Don't know/Not sure
Refused

7.3a. On the average, when you smoked during the past 30 days, about how many cigarettes did you smoke a day?

Number of cigarettes
Don't know/Not sure
Refused

7.4. During the past 12 months, have you quit smoking for 1 day or longer?

a. Yes
b. No
c. Don't know/Not sure
d. Refused

**Appendix III:
2000 Behavioral Risk Factor Survey
Arizona Questionnaire**

7.5. About how long has it been since you last smoked cigarettes regularly, that is, daily?

Time code

- a. Within the past month (0 to 1 month)
- b. Within the past 3 months (1 to 3 months)
- c. Within the past 6 months (3 to 6 months)
- d. Within the past year (6 to 12 months)
- e. Within the past 5 years (1 to 5 years)
- f. Within the past 15 years (5 to 15 years)
- g. 15 or more years ago
- h. Don't know/Not sure
- i. Never smoked regularly
- j. Refused

Section 8: Fruits and Vegetables

These next questions are about the foods you usually eat or drink. Please tell me how often you eat or drink each one, for example, twice a week, three times a month, and so forth. Remember, I am only interested in the foods you eat. Include all foods you eat, both at home and away from home.

8.1. How often do you drink fruit juices such as orange, grapefruit, or tomato?

- a. Per day
- b. Per week
- c. Per month
- d. Per year
- e. Never
- f. Don't know/Not sure
- g. Refused

8.2. Not counting juice, how often do you eat fruit?

- a. Per day
- b. Per week
- c. Per month
- d. Per year
- e. Never
- f. Don't know/Not sure
- g. Refused

8.3. How often do you eat green salad?

- a. Per day
- b. Per week
- c. Per month
- d. Per year
- e. Never
- f. Don't know/Not sure
- g. Refused

8.4. How often do you eat potatoes not including french fries, fried potatoes, or potato chips?

- a. Per day
- b. Per week
- c. Per month
- d. Per year
- e. Never
- f. Don't know/Not sure
- g. Refused

8.5. How often do you eat carrots?

- a. Per day
- b. Per week
- c. Per month
- d. Per year
- e. Never
- f. Don't know/Not sure
- g. Refused

8.6. Not counting carrots, potatoes, or salad, how many servings of vegetables do you usually eat?

- a. Per day
- b. Per week
- c. Per month
- d. Per year
- e. Never
- f. Don't know/Not sure
- g. Refused

Section 9: Weight Control

9.1. Are you now trying to lose weight?

- a. Yes
- b. No
- c. Don't know/Not sure
- d. Refused

9.2. Are you now trying to maintain your current weight, that is to keep from gaining weight?

- a. Yes
- b. No
- c. Don't know/Not sure
- d. Refused

**Appendix III:
2000 Behavioral Risk Factor Survey
Arizona Questionnaire**

9.3. Are you eating either fewer calories or less fat to lose weight?

keep from gaining weight?

- a. Yes, fewer calories
- b. Yes, less fat
- c. Yes, fewer calories and less fat
- d. No
- e. Don't know/Not sure
- f. Refused

9.4. Are you using physical activity or exercise to lose weight?

keep from gaining weight?

- a. Yes
- b. No
- c. Don't know/Not sure
- d. Refused

9.5. In the past 12 months, has a doctor, nurse, or other health professional given you advice about your weight?

- a. Yes, lose weight
- b. Yes, gain weight
- c. Yes, maintain current weight
- d. No
- e. Don't know/Not sure
- f. Refused

Section 10: Demographics

10.1. What is your age?

Code age in years
Don't know/Not sure
Refused

10.2. What is your race?

Would you say:

- a. White
- b. Black
- c. Asian, Pacific Islander
- d. American Indian, Alaska Native
- e. Other: **[specify]**
- f. Don't know/Not sure
- g. Refused

10.3. Are you of Spanish or Hispanic origin?

- a. Yes
- b. No
- c. Don't know/Not sure
- d. Refused

10.4. Are you:

- a. Married
- b. Divorced
- c. Widowed
- d. Separated
- e. Never been married
- f. A member of an unmarried couple
- g. Refused

10.5. How many children live in your household who are...

- a. less than 5 years old?
- b. 5 through 12 years old?
- c. 13 through 17 years old?

10.6. What is the highest grade or year of school you completed?

- a. Never attended school or only attended kindergarten
- b. Grades 1 through 8 (Elementary)
- c. Grades 9 through 11 (Some high school)
- d. Grade 12 or GED (High school graduate)
- e. College 1 year to 3 years (Some college or technical school)
- f. College 4 years or more (College graduate)
- g. Refused

10.7. Are you currently:

- a. Employed for wages
- b. Self-employed
- c. Out of work for more than 1 year
- d. Out of work for less than 1 year
- e. Homemaker
- f. Student
- g. Retired
- h. Unable to work
- i. Refused

**Appendix III:
2000 Behavioral Risk Factor Survey
Arizona Questionnaire**

10.8. Is your annual household income from all sources:

- a. Less than \$25,000
- b. Less than \$20,000
- c. Less than \$15,000
- d. Less than \$10,000
- e. Less than \$35,000
- f. Less than \$50,000
- g. Less than \$75,000
- h. \$75,000 or more
- i. Don't know/Not sure
- j. Refused

10.9. Have you ever served on active duty in the United States Armed Forces, either in the regular military or in a National Guard or military reserve unit?

- a. Yes
- b. No
- c. Don't know/Not sure
- d. Refused

10.10. Which of the following best describes your current military status?

Are you:

- a. Currently on active duty
- b. Currently in reserves
- c. No longer in military service
- d. Don't know/Not sure
- e. Refused

10.11. In the last 12 months have you received some or all of your health care from VA facilities?

- a. Yes, all of my health care
- b. Yes, some of my health care
- c. No, no VA health care received
- d. Don't know/not sure
- e. Refused

10.12. About how much do you weigh without shoes?

Weight pounds
Don't know/Not sure
Refused

10.13. How much would you like to weigh?

Weight pounds
Don't know/Not sure
Refused

10.14. About how tall are you without shoes?

Height ft/inches
Don't know/Not sure
Refused

10.15. What county do you live in?

FIPS county code
Don't know/not sure
Refused

10.16. Do you have more than one telephone number in your household?

- a. Yes
- b. No
- c. Refused

10.17. How many residential telephone numbers do you have?

Total telephone numbers
Refused

10.18. Indicate sex of respondent.

Male
Female

Section 11: Women's Health

11.1. A mammogram is an X-ray of each breast to look for breast cancer. Have you ever had a mammogram?

- a. Yes
- b. No
- c. Don't know/Not sure
- d. Refused

11.2. How long has it been since you had your last mammogram?

- a. Within the past year (1 to 12 months ago)
- b. Within the past 2 years (1 to 2 years ago)
- c. Within the past 3 years (2 to 3 years ago)
- d. Within the past 5 years (3 to 5 years ago)
- e. 5 or more years ago
- f. Don't know/Not sure
- g. Refused

**Appendix III:
2000 Behavioral Risk Factor Survey
Arizona Questionnaire**

11.3. Was your last mammogram done as part of a routine checkup, because of a breast problem other than cancer, or because you've already had breast cancer?

- a. Routine checkup
- b. Breast problem other than cancer
- c. Had breast cancer
- d. Don't know/Not sure
- e. Refused

11.4. A clinical breast exam is when a doctor, nurse, or other health professional feels the breast for lumps. Have you ever had a clinical breast exam?

- a. Yes
- b. No
- c. Don't know/Not sure
- d. Refused

11.5. How long has it been since your last breast exam?

- a. Within the past year (1 to 12 months ago)
- b. Within the past 2 years (1 to 2 years ago)
- c. Within the past 3 years (2 to 3 years ago)
- d. Within the past 5 years (3 to 5 years ago)
- e. 5 or more years ago
- f. Don't know/Not sure
- g. Refused

11.6. Was your last breast exam done as part of a routine checkup, because of a breast problem other than cancer, or because you've already had breast cancer?

- a. Routine Checkup
- b. Breast problem other than cancer
- c. Had breast cancer
- d. Don't know/Not sure
- e. Refused

11.7. A Pap smear is a test for cancer of the cervix. Have you ever had a Pap smear?

- a. Yes
- b. No
- c. Don't know/Not sure
- d. Refused

11.8. How long has it been since you had your last Pap smear?

- a. Within the past year (1 to 12 months ago)
- b. Within the past 2 years (1 to 2 years ago)
- c. Within the past 3 years (2 to 3 years ago)
- d. Within the past 5 years (3 to 5 years ago)
- e. 5 or more years ago
- f. Don't know/Not sure
- g. Refused

11.9. Was your last Pap smear done as part of a routine exam, or to check a current or previous problem?

- a. Routine exam
- b. Check current or previous problem
- c. Other
- d. Don't know/Not sure
- e. Refused

11.10. Have you had a hysterectomy?

- a. Yes
- b. No
- c. Don't know/Not sure

11.11. To your knowledge, are you now pregnant?

- a. Yes
- b. No
- c. Don't know/Not sure
- d. Refused

Section 12: HIV/AIDS

The next few questions are about the national health problem of HIV, the virus that causes AIDS. Please remember that your answers are strictly confidential and that you don't have to answer every question if you don't want to.

12.1. If you had a child in school, at what grade do you think he or she should begin receiving education in school about HIV infection and AIDS?

- a. Grade
- b. Kindergarten
- c. Never
- d. Don't know/Not sure
- e. Refused

**Appendix III:
2000 Behavioral Risk Factor Survey
Arizona Questionnaire**

12.2. If you had a teenager who was sexually active, would you encourage him or her to use a condom?

- a. Yes
- b. No
- c. Would give other advice
- d. Don't know/Not sure
- e. Refused

12.3. What are your chances of getting infected with HIV, the virus that causes AIDS?

Would you say:

- a. High
- b. Medium
- c. Low
- d. None
- e. Not applicable
- f. Don't know/Not sure
- g. Refused

12.4. Have you donated blood since March 1985?

- a. Yes
- b. No
- c. Don't know/Not sure
- d. Refused

12.5. Have you donated blood in the past 12 months?

- a. Yes
- b. No
- c. Don't know/Not sure
- d. Refused

12.6. Except for tests you may have had as part of blood donations, have you ever been tested for HIV?

- a. Yes
- b. No
- c. Don't know/Not sure
- d. Refused

12.6a. Have you ever been tested for HIV?

- a. Yes
- b. No
- c. Don't know/Not sure
- d. Refused

12.7. Not including your blood donations, have you been tested for HIV in the past 12 months?

- a. Yes
- b. No
- c. Don't know/Not sure
- d. Refused

12.7a. Have you been tested for HIV in the past 12 months?

(175)

- a. Yes
- b. No
- c. Don't know/Not sure
- d. Refused

12.8. What was the main reason you had your last test for HIV?

- a. For hospitalization or surgical procedure
- b. To apply for health insurance
- c. To apply for life insurance
- d. To apply for a marriage license
- e. For military induction or military service
- f. For immigration
- g. Just to find out if you were infected
- h. Because of referral by a doctor
- i. Because of pregnancy
- j. Referred by your sex partner
- k. Because it was part of a blood donation process
- l. For routine checkup
- m. Because of occupational exposure
- n. Because of illness
- o. Because I am at risk for HIV
- q. Other
- r. Don't know/Not sure)

12.9. Where did you have your last test for HIV?

- a. Private doctor, HMO
- b. Blood bank, plasma center, red cross
- c. Health department
- d. AIDS clinic, counseling, testing site
- e. Hospital, emergency room, outpatient clinic
- f. Family planning clinic
- g. Prenatal clinic, obstetrician's office
- h. Tuberculosis clinic
- i. STD clinic
- j. Community health clinic

- k. Clinic run by employer
- l. Insurance company clinic
- m. Other public clinic

**Appendix III:
2000 Behavioral Risk Factor Survey
Arizona Questionnaire**

- n. Drug treatment facility
- o. Military induction or military service site
- p. Immigration site
- q. At home, home visit by nurse or health worker
- r. At home using self-sampling kit
- s. In jail or prison
- t. Other
- u. Don't know/Not sure
- v. Refused

when checked by a health professional.

- a. Times per day
- b. Times per week
- c. Times per month
- d. Times per year
- e. Never
- f. Don't know/Not sure
- g. Refused

12.10. Did you receive the results of your last test?

- a. Yes
- b. No
- c. Don't know/Not sure
- d. Refused

12.11. Did you receive counseling or talk with a health care professional about the results of your test?

- a. Yes
- b. No
- c. Don't know/Not sure
- d. Refused

5. About how often do you check your feet for any sores or irritations? Include times when checked by a family member or friend, but do not include times when checked by a health professional.

- a. Times per day
- b. Times per week
- c. Times per month
- d. Times per year
- e. Never
- f. No feet
- g. Don't know/Not sure
- h. Refused

6. Have you had any sores or irritations on your feet that took more than four weeks to heal?

- a. Yes
- b. No
- c. Don't know/Not sure
- d. Refused

OPTIONAL MODULES

Module 1: Diabetes

1. How old were you when you were told you have diabetes?

- Code age in years
- Don't know/Not sure
- Refused

2. Are you now taking insulin?

- a. Yes
- b. No
- c. Refused

3. Are you now taking diabetes pills?

- a. Yes
- b. No
- c. Don't know/Not sure
- d. Refused

4. About how often do you check your blood for glucose or sugar? Include times when checked by a family member or friend, but do not include times

7. About how many times in the past 12 months have you seen a doctor, nurse, or other health professional for your diabetes?

- a. Number of times
- b. None
- c. Don't know/Not sure
- d. Refused

8. A test for hemoglobin "A one C" measures the average level of blood sugar over the past three months. About how many times in the past 12 months has a doctor, nurse, or other health professional checked you for hemoglobin "A one C"?

- a. Number of times
- b. None
- c. Never heard of hemoglobin "A one C" test
- d. Don't know/Not sure
- e. Refused

**Appendix III:
2000 Behavioral Risk Factor Survey
Arizona Questionnaire**

9. About how many times in the past 12 months has a health professional checked your feet for any sores or irritations?

- a. Number of times
- b. None
- c. Don't know/Not sure
- d. Refused

10. When was the last time you had an eye exam in which the pupils were dilated? This would have made you temporarily sensitive to bright light.

- a. Within the past month (0 to 1 month ago)
- b. Within the past year (1 to 12 months ago)
- c. Within the past 2 years (1 to 2 years ago)
- d. 2 or more years ago
- e. Never
- f. Don't know/Not sure
- g. Refused

11. Has a doctor ever told you that diabetes has affected your eyes or that you had retinopathy?

- a. Yes
- b. No
- c. Don't know/Not sure
- d. Refused

12. Have you ever taken a course or class in how to manage your diabetes yourself?

- a. Yes
- b. No
- c. Don't know/Not sure
- d. Refused

Module 6: Oral Health

1. How long has it been since you last visited a dentist or a dental clinic for any reason?

- a. Within the past year (1 to 12 months ago)
- b. Within the past 2 years (1 to 2 years ago)
- c. Within the past 5 years (2 to 5 years ago)
- d. 5 or more years ago
- e. Don't know/Not sure
- f. Never
- g. Refused

2. How many of your permanent teeth have been removed because of tooth decay or gum disease? Do not include teeth lost for other reasons, such as injury or orthodontics.

- a. 1 to 5
- b. 6 or more but not all
- c. All
- d. None
- e. Don't know/Not sure
- f. Refused

3. How long has it been since you had your teeth cleaned by a dentist or dental hygienist?

- a. Within the past year (1 to 12 months ago)
- b. Within the past 2 years (1 to 2 years ago)
- c. Within the past 5 years (2 to 5 years ago)
- d. 5 or more years ago
- e. Don't know/Not sure
- f. Never
- g. Refused

4. What is the main reason you have not visited the dentist in the last year?

Reason code

- a. Fear, apprehension, nervousness, pain, dislike going
- b. Cost
- c. Do not have/know a dentist
- d. Cannot get to the office/clinic (too far away, no transportation, no appointments available)
- e. No reason to go (no problems, no teeth)
- f. Other priorities
- g. Have not thought of it
- h. Other
- i. Don't know/Not sure
- j. Refused

5. Do you have any kind of insurance coverage that pays for some or all of your routine dental care, including dental insurance, prepaid plans such as HMOs, or government plans such as Medicaid?

- a. Yes
- b. No
- c. Don't know/Not sure
- d. Refused

Appendix III:
2000 Behavioral Risk Factor Survey
Arizona Questionnaire

Module 10: Immunization

1. During the past 12 months, have you had a flu shot?
 - a. Yes
 - b. No
 - c. Don't know/Not sure
 - d. Refused
2. Have you ever had a pneumonia vaccination?
 - a. Yes
 - b. No
 - c. Don't know/Not sure
 - d. Refused

Module 14: Arthritis

1. During the past 12 months, have you had pain, aching, stiffness or swelling in or around a joint?
 - a. Yes
 - b. No
 - c. Don't know/Not sure
 - d. Refused
2. Were these symptoms present on most days for at least one month?
 - a. Yes
 - b. No
 - c. Don't know/Not sure
 - d. Refused
3. Are you now limited in any way in any activities because of joint symptoms?
 - a. Yes
 - b. No
 - c. Don't know/Not sure
 - d. Refused
4. Have you ever been told by a doctor that you have arthritis?
 - a. Yes
 - b. No
 - c. Don't know/Not sure
 - d. Refused

5. What type of arthritis did the doctor say you have?

- a. Osteoarthritis/degenerative arthritis
- b. Rheumatism
- c. Rheumatoid Arthritis
- d. Lyme disease
- e. Other [specify]
- f. Never saw a doctor
- g. Don't know/Not sure
- h. Refused

6. Are you currently being treated by a doctor for arthritis?

- a. Yes
- b. No
- c. Don't know/Not sure
- d. Refused

Module 15: Quality of Life and Care Giving

These next questions are about physical, mental, or emotional problems or limitations you may have in your daily life.

1. Are you limited in any way in any activities because of any impairment or health problem?

- a. Yes
- b. No
- c. Don't know/Not sure
- d. Refused

2. What is the major impairment or health problem that limits your activities?

- a. Arthritis/rheumatism
- b. Back or neck problem
- c. Fractures, bone/joint injury
- d. Walking problem
- e. Lung/breathing problem
- f. Hearing problem
- g. Eye/vision problem
- h. Heart problem
- i. Stroke problem
- j. Hypertension/high blood pressure
- k. Diabetes
- l. Cancer
- m. Depression/anxiety/emotional problem
- n. Other impairment/problem
- o. Don't know/Not sure
- p. Refused

Appendix III:
2000 Behavioral Risk Factor Survey
Arizona Questionnaire

3. For how long have your activities been limited because of your major impairment or health problem?

- a. Days
- b. Weeks
- c. Months
- d. Years
- e. Don't know/Not Sure
- f. Refused

4. Because of any impairment or health problem, do you need the help of other persons with your PERSONAL CARE needs, such as eating, bathing, dressing, or getting around the house?

- a. Yes
- b. No
- c. Don't know/Not sure
- d. Refused

5. Because of any impairment or health problem, do you need the help of other persons in handling your ROUTINE needs, such as everyday household chores, doing necessary business, shopping, or getting around for other purposes?

- a. Yes
- b. No
- c. Don't know/Not sure
- d. Refused

6. During the past 30 days, for about how many days did pain make it hard for you to do your usual activities, such as self-care, work, or recreation?

- a. Number of days
- b. None
- c. Don't know/Not sure
- d. Refused

7. During the past 30 days, for about how many days have you felt sad, blue, or depressed?

- a. Number of days
- b. None
- c. Don't know/Not sure
- d. Refused

8. During the past 30 days, for about how many days have you felt worried, tense, or anxious?

- a. Number of days
- b. None
- c. Don't know/Not sure
- d. Refused

9. During the past 30 days, for about how many days have you felt you did not get enough rest or sleep?

- a. Number of days
- b. None
- c. Don't know/Not sure
- d. Refused

10. During the past 30 days, for about how many days have you felt very healthy and full of energy?

- a. Number of days
- b. None
- c. Don't know/Not sure
- d. Refused

11. Earlier you reported that due to your impairment you need some assistance from another person with your PERSONAL CARE needs. Who usually helps you with your personal care needs, such as eating, bathing, dressing, or getting around the house?

- a. Husband/wife/partner
- b. Partner/son/son-in-law/daughter/daughter-in-law
- c. Other relative
- d. Unpaid volunteer
- e. Paid employee or home health service
- f. Friend or neighbor
- g. Combination of family and/or friends
- h. Other
- i. No one helps me
- j. Don't know/Not sure
- k. Refused

12. Is the assistance you receive to meet your personal care needs:

- a. Usually adequate
- b. Sometimes adequate
- c. Rarely adequate
- d. Don't know/Not sure
- e. Refused

**Appendix III:
2000 Behavioral Risk Factor Survey
Arizona Questionnaire**

13. Earlier you reported that due to your impairment you need some assistance from another person with your ROUTINE needs. Who usually helps you with handling your routine needs, such as everyday household chores, shopping, or getting around for other purposes?

- a. Husband/wife/partner
- b. Parent/son/son-in-law/daughter/daughter-in-law
- c. Other relative
- d. Unpaid relative
- e. Paid employee or home health service
- f. Friend or neighbor
- g. Combination of family and/or friends
- h. Other
- i. No one helps me
- j. Don't know/Not sure
- k. Refused

14. Is the assistance you receive to meet your routine needs:

- a. Usually adequate
- b. Sometimes adequate
- c. Rarely adequate
- d. Don't know/Not sure
- e. Refused

Module 16: Folic Acid

1. Do you currently take any vitamin pills or supplements?

- a. Yes
- b. No
- c. Don't know/Not sure
- d. Refused

2. Are any of these a multivitamin?

- a. Yes
- b. No
- c. Don't know/Not sure
- d. Refused

3. Do any of the vitamin pills or supplements you take contain folic acid?

- a. Yes
- b. No
- c. Don't know/Not sure
- d. Refused

4. How often do you take this vitamin pill or supplement?

- a. Times per day
- b. Times per week
- c. Times per month
- d. Don't know/Not sure
- e. Refused

5. Some health experts recommend that women take 400 micrograms of the B vitamin folic acid, for which one of the following reasons

- a. To make strong bones
- b. To prevent birth defects
- c. To prevent high blood pressure
- d. Some other reason
- e. Don't know/Not sure
- f. Refused

STATE ADDED QUESTIONS

Series 1-Prostate Cancer

This section of questions deals with Prostate Cancer and Screening practices.

Next, I'd like to ask you about the PSA or Prostate Specific Antigen blood test. This test is used by some physicians to help detect prostate cancer or to determine how well prostate cancer is responding to treatment.

1. Have you ever been told by a physician that you should have a PSA blood test to check for prostate cancer?

- a. Yes
- b. No
- c. Don't know/Not sure
- d. Refused

2. Have you ever had a PSA blood test?

- a. Yes
- b. No
- c. Don't know/Not sure
- d. Refused

Appendix III:
2000 Behavioral Risk Factor Survey
Arizona Questionnaire

3. How long has it been since your last Prostate Specific Antigen blood test?

1. Within the past year.
2. Within the past two years.
3. Within the past 5 years.
4. More than 5 years ago.
5. Don't know/Not sure
6. Refused

4. Was your last PSA blood test done as part of a routine checkup, because of a prostate problem other than cancer, or because you've already had prostate cancer?

1. Routine checkup.
2. Prostate problem other than cancer.
3. Had prostate cancer.
4. Don't know/Not sure.
5. Refused.

5. Has your father, any of your brothers or any of your sons had prostate cancer?

- a. Yes
- b. No
- c. Don't know/Not sure
- d. Refused

Series 2-Mental health

The next few questions are about mental health. Please remember that your answers are strictly confidential and that you don't have to answer any question if you don't want to.

1. During the past year, would you say that you experienced:

1. A lot of stress
2. A moderate amount of stress
3. Relatively little stress
4. Almost no stress at all
5. Don't know/Not sure
6. Refused

2. In the past year, how much effect has stress had on your health:

1. A lot
2. Some
3. Hardly any
4. None
5. Don't know/Not sure
6. Refused

3. In the past year, did you think about seeking help for any personal or emotional problem from family or friends?

- a. Yes
- b. No
- c. Don't know/Not sure
- d. Refused

4. From a helping professional or self-help group?

- a. Yes
- b. No
- c. Don't know/Not sure
- d. Refused

4A. Did you actually seek any help?

- a. Yes
- b. No
- c. Don't know/Not sure
- d. Refused

5. During the past 12 months, did your worksite offer any information or activities concerning stress management?

- a. Yes
- b. No
- c. Don't know/Not sure
- d. Refused

5A. Which of the following were offered relating to stress management?

1. Individual classes
2. Group classes
3. Resource materials, such as posters, brochures, pamphlets or videos
4. Job redesign, personnel reassignments
5. Don't know/Not sure
6. Refused

**Appendix III:
2000 Behavioral Risk Factor Survey
Arizona Questionnaire**

6. During the past 12 months, did you ever consider attempting suicide?

- a. Yes
- b. No
- c. Don't know/Not sure
- d. Refused

6A. If you attempted suicide during the past 12 months, did any attempt result in an injury, poisoning, or overdose that had to be treated by a doctor or nurse?

- a. Yes
- b. No
- c. Don't know/Not sure
- d. Refused

Series 3-Osteoporosis

1. Thinking back over the past month, how many servings of milk or milk products do you usually consume each day? One serving equals 8 ounces of milk or yogurt, or two slices of cheese.

- 0. Less than 1
- 1. 1 serving
- 2. 2 servings
- 3. 3 servings
- 4. 4 servings
- 5. 5 servings
- 6. Don't consume milk or milk products
- 7. Don't know/Not sure
- 8. Refused

2. During the past month, did you regularly take any supplements containing only calcium?

- a. Yes
- b. No
- c. Don't know/Not sure
- d. Refused

3. How often do you take calcium supplements?

- 1. Per day
- 2. Per week
- 3. Per month
- 4. Per year
- 5. Never
- 6. Don't know/Not sure
- 7. Refused

4. How often do you do strength-building exercises, like lifting free weights, use weight training machines, or pushups or pull-ups?

- 1. Per day
- 2. Per week
- 3. Per month
- 4. Per year
- 5. Never
- 6. Don't know/Not sure
- 7. Refused

5. Have you ever been tested for osteoporosis by having a bone density scan which is a test that scans and measures your bones, similar to an x-ray?

- a. Yes
- b. No
- c. Don't know/Not sure
- d. Refused

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APPENDIX IV
Behavioral Risk Factor Survey
BRFS Weighting Formula

$$\text{FINALWT} = \text{GEOWT} * \text{DENWT} * 1 \text{ OVER } \text{NPH} * \text{NAD} * \text{CSA} * \text{POSTSTRAT}$$

The computational formula above is intended to reflect all the possible factors that could be taken into account in weighting a state's data. Where a factor does not apply, its value is set to one.

FINALWT is the final weight assigned to each respondent.

GEOWT accounts for differences in the basic probability of selection among strata (subsets of area code/prefix combinations) intended to correspond as closely as possible to specified geographic regions of a state. It is the inverse of the ratio of the estimated sampling fraction of each stratum to the stratum with the largest estimated sampling fraction. There is almost never a complete correspondence between strata, which are defined by subsets of area code/prefix combinations, and regions, which are defined by the boundaries of government entities.

DENWT accounts for differences in the basic probability of selection between telephone numbers from a stratum that is presumed to contain many households (a high-density stratum) and telephone numbers from a stratum that is presumed to contain few households (a low-density stratum). It is the inverse of the ratio of the sampling fraction of the low-density stratum to the high-density stratum. In the BRFS, stratification by presumed household density is usually found in a design in which telephone numbers from hundred blocks (sets of telephone numbers with identical first eight digits and all possible final two digits) with one or more listed residential numbers (one-plus blocks) are sampled at a higher rate than telephone numbers from hundred blocks with no listed residential numbers (zero blocks).

1/NPH is the inverse of the number of residential telephone numbers in the respondent's household.

NAD is the number of adults in the respondent's household.

CSA is the ratio of the expected cluster size to the actual cluster size.

POSTSTRAT is the number of people in an age-by-sex or age-by-race-by-sex category in the population of a region or a state divided by the sum of the products of the preceding weights for the respondents in that same age-by-sex or age-by-race-by-sex category. It adjusts for non-coverage and non-response and, before 1995, also adjusts for different probabilities of selection by region, where applicable.

